UNIVERSITY COLLEGE,

BRISTOL.

CALENDAR FOR THE SESSION

1883-4.

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UNIVERSITY COLLEGE, BRISTOL.

CALENDAR, 1883-84.

BRISTOL:
ARROWSMITH, PRINTER, QUAY STREET.

1883.

The College supplies for persons of either sex above the ordinary school age the means of continuing their studies in Science, Languages, History and Literature; and particularly affords appropriate instruction in those branches of Applied Science which are more nearly connected with the arts and manufactures. A course of instruction has been arranged for students intending to become Engineers, Surveyors or Architects. Special attention is given to class teaching and laboratory work.

Evening Lectures and Classes.

The wants of teachers, clerks, artisans and others, who are employed during the day, are supplied by evening classes and courses of lectures, to which admission may be obtained at low fees.

School of Medicine.

Medical education is provided by the Bristol Medical School, which is affiliated to the College.

Professor Sollas and Dr. Langley* are willing to receive students into their houses during the College Session. For information with regard to terms, &c., apply to them, or to the Principal.

Information respecting the lodgings of students coming from a distance will be given by the Principal on application through the Registrar and Secretary.

Mrs. Ramsay will attend at the College at the beginning of each Term for the purpose of admitting women students, and of giving information with regard to homes where women students can be received, and of affording such advice as may be required.

The Calendar is published at the end of the third Term in each year. An Appendix is published in October, containing the list of Honours obtained in the Examinations at the end of the third Term, and an account of such changes as take place during the vacation. This is to be had gratis, on application to the Registrar and Secretary.

All inquiries and applications for admission to any of the classes must be made at the College in Tyndall's Park.

* Address: 9 Clyde Park, Redland, Bristol.

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UNIVERSITY COLLEGE, BRISTOL.

GOVERNORS OF THE COLLEGE.

(1) All Donors of £50 and upwards, *for life;* and all Annual Subscribers of £5 and upwards, *during subscription.*

(2) Nominees of Corporate Bodies or Associations, who are Donors of £250 or upwards, *in perpetuity;* or Annual Subscribers of £10 or upwards, *during subscription.*

(3) Certain Official and Representative persons.

Eleven Members of the Council are elected by the Governors.

All Governors are entitled to vote on the following scale :—

Corporate Bodies, or Associations.		Individuals or Firms.			To have votes as under on account of contributions.
Donors of	Subscribers of	Donors of	Subscribers of		
£250	£10	£50	£5	.....	1
500	20	100	10	.....	2
1000	50	250	25	.....	3
2000	100	500	50	.....	4
3000	150	750	75	.....	5
4000	200	1000	100	.....	6

President.

THE VERY REV. GILBERT ELLIOT, D.D., Dean of Bristol.

Principal.

WILLIAM RAMSAY, Ph.D.

Council.

Albert Fry, Esq., *Chairman.* (1)
William Killigrew Wait, Esq., *Vice-Chairman.* (8)
William Proctor Baker, Esq., *Treasurer.* (1)
Francis Nonus Budd, M.A., Senior Fellow of Gonville and Caius College, Cambridge. (1)
Rev. John Wm. Caldicott, D.D., Head Master of the Grammar School, Bristol. (1)
Nelson C. Dobson, F.R.C.S. (9)
Very Rev. Gilbert Elliot, D.D. (11)
Lewis Fry, Esq., M.P. (1)
Rev. Hereford B. George, M.A., Fellow and Tutor of New College, Oxford. (7)
William Edwards George, Esq. (1)
Rev. Frederic William Gotch, M.A., LL.D. (1)
Rev. B. Jowett, M.A., Vice-Chancellor of the University of Oxford, Master of Balliol College and Regius Professor of Greek. (6)
Rev. John Percival, M.A., LL.D., President of Trinity College, Oxford, and Canon of Bristol Cathedral. (1)
George Frederick Schacht, F.C.S., late Vice-President of the Pharmaceutical Society of Great Britain. (1)
William Smith, Esq. (1)
William H. Spencer, M.A., M.D. (9)
James Stuart, M.A., Professor of Mechanism and Applied Mechanics, Cambridge. (3)
Edward B. Tylor, D.C.L., F.R.S. (2)
Frederick Wills, Esq. (1)
Rev. James M. Wilson, M.A., Head Master of Clifton College. (5)
Philip J. Worsley, B.A. (4)
James Wyld, F.R.G.S., D.C.L. (10)

(1) Elected by the Governors of the College. (2) Nominated by the Vice-Chancellor of the University of Oxford. (3) Nominated by the Vice-Chancellor of the University of Cambridge. (4) Nominated by the Vice-Chancellor of the University of London. (5) Nominated by the Lord President of the Privy Council. (6) Nominated by Balliol College, Oxford. (7) Nominated by New College, Oxford. (8) Nominated by the Principal and Professors of the College. (9) Nominated by the Bristol Medical School. (10) Nominated by the Worshipful the Clothworkers' Company. (11) *Ex-officio* a Member of the Council.

Registrar and Secretary.

Alfred E. Stock.

Bankers.

Messrs. Miles, Cave, Baillie & Co., Bristol Old Bank.

PROFESSORS AND LECTURERS.

Chemistry	Professor, W. RAMSAY, Ph.D. Lecturer and Demonstrator, SYDNEY YOUNG, D.Sc.
Mathematics	Lecturer, EDWARD BUCK, M.A.
Experimental Physics	Professor, S. P. THOMPSON, D.Sc., B.A. Demonstrator, C. C. STARLING.
Engineering	Professor, H. S. HELE SHAW.
Architecture	Lecturer, W. EDWARD JONES.
Geology and Zoology	Professor, W. J. SOLLAS, M.A., Fellow of St. John's College, Cambridge.
Botany	Lecturer, A. LEIPNER.
Political Economy	Lecturer, R. MARY FRY.
Philosophy and Logic	Professor, R. FANSHAWE, M.A.
Modern History and English Literature	Professor, JAMES ROWLEY, M.A.
Greek, Latin, Ancient History and Literature	Professor, R. FANSHAWE, M.A., late Fellow of New College, Oxford. Lecturer, EDWARD BUCK, M.A.
Hebrew	Lecturer, BERNHARD HEYMANN.
French	Lecturers, EUGÈNE PELLISSIER, M.A., LL.B., B.Sc. A. d'OURSY, B.A.
German	Lecturer, A. LEIPNER.

CHEMICAL PROFESSORSHIP.

The Professorship of Chemisty is at present endowed by an annual contribution from the Worshipful the Clothworkers' Company of London.

ANCHOR PROFESSORSHIP.

The Professorship of Engineering is at present endowed by an annual contribution from the Anchor Society of Bristol.

Calendar, 1883–84.

	SEPTEMBER—1883.	
19	Candidates for College Scholarships to send in their names.	W
28	Scholarship Examinations begin.	F
	OCTOBER.	
1	Winter Session of Medical School begins.	M
1	Admission of Medical Students.	M
4	Admission of Day Students begins.	Th
6	Opening Lecture, at 8 p.m., in the Lecture Room of the Bristol Museum and Library.	S
8	First Term begins for Day Classes and for Evening Classes in Science.	M*
11	First Term begins for Evening Classes in Literature.	Th†
15	B.Sc. Examination of the University of London begins.	M
22	B.A. Examination of the University of London begins.	M
	NOVEMBER.	
5	M.B. Examination at the University of London begins.	M
	DECEMBER.	
11	First Term Examinations begin.	Tu
17	First Term ends.	M
	JANUARY—1884.	
14	Matriculation Examination of the University of London begins	M
17	Second Term begins for Day Classes and for Evening Classes in Science.	Th*
21	Second Term begins for Evening Classes in Literature.	M†
	FEBRUARY.	
15	Candidates for Honour Certificates in Inorganic Chemistry and Engineering to send in their names.	F
	MARCH.	
8	Candidates for Whitworth Scholarships to send in their names.	S
20	Candidates for Examinations of Science and Art Department to send in their names.	Th
26	Second Term Examinations begin.	W
31	Winter Session of the Medical School ends.	M

* Evening Classes in Science:—Chemistry, Mathematics, Physics, Applied Mechanics and Steam, Geometrical and Machine Drawing, Geology, Botany (2nd Term), Political Economy.

† Evening Classes in Literature:—History, Literature, Greek, Latin, French, German.

Calendar, 1883–84.

	APRIL.	
1	Second Term ends.	Th
28	Third Term begins for Day and Evening Classes.	M
	MAY.	
1	Summer Session of Medical School begins.	Th
1	Admission of Medical Students.	Th
15	Candidates for Honour Certificates (except in the subjects of Inorganic Chemistry and Engineering) to send in their names.	Th
31	Candidates for Gilchrist Scholarships to send in their names.	S
	JUNE.	
2	M.A. Examination (Branch I.) of the University of London begins.	M
2	Monday in Whitsun Week } College closed.	M
3	Tuesday in Whitsun Week } College closed.	Th
9	Oxford University Examination for Women begins.	M
9	M.A. Examination (Branch II.) of the University of London begins.	M
16	Cambridge University Higher Local Examination, held in the College, begins.	M
16	Matriculation Examination of the University of London, held in the College, begins.	M
16	M.A. Examination (Branch III.) of the University of London begins.	M
27	Third Term Examinations begin.	F
	JULY.	
1	Third Term ends.	Th
21	Intermediate Examination in Arts of the University of London begins.	M
21	Intermediate Examination in Science of the University of London begins.	M
21	Preliminary Scientific (M.B.) Examination of the University of London begins.	M
28	Intermediate Examination in Medicine of the University of London begins.	M
31	Summer Session of Medical School ends.	Th

Scholarships tenable at the College.

GILCHRIST SCHOLARSHIPS.

Secretary to the Gilchrist Educational Trust:
WILLIAM B. CARPENTER, M.D., C.B., F.R.S.,
4 Broad Sanctuary, Westminster, S.W.

Conditions for Scholarship instituted by the Gilchrist Educational Trust in connection with University College, Bristol:

A Scholarship of the value of £50 per annum, tenable for Three Years, will be annually rewarded by competitive Examination, under the following conditions:—

1.—Every Candidate must apply to the Principal of University College, Bristol, before 1st June, and submit to him a certificate of age and satisfactory testimonials to character.

2.—Every Candidate must have completed his *sixteenth* year, and his age on the day of election must not exceed *eighteen* years.

3.—Candidates approved by the Principal shall present themselves at the Midsummer Matriculation Examination of the University of London; and the Scholarship of £50 shall be awarded to the Candidate who shall stand highest at that Examination, provided that he pass in the *Honours* Division.

4.—Every Scholar shall attend in each year at least Three Courses of Lectures, to be selected by himself, in University College, Bristol, provided that the total number of lectures in such courses averages twelve lectures per week throughout the session. But, if permitted by the authorities of the College, he may spend his third year at some other college.

5.—Every Scholar shall present, on his applying for each half-yearly instalment of his Scholarship (which will be payable on the 1st of January and the first of July), a certificate from the Principal of University College, Bristol, that his conduct has been good, and that he is pursuing his studies with a view to graduation in the University of London, in one of the following Faculties: Arts, Laws, Science or Medicine.

6.—Every Scholar shall be required to present himself at the Intermediate Examination in one of the above-named Faculties of the University of London, at an interval of not more than two academical years from his election, unless excused from doing so by the Gilchrist Trustees; and if he do not so present himself (unless by permission of the Trustees), or if he fail to pass the Examination, he shall be considered as having forfeited his claim to the remaining instalments of his Scholarship.

NOTE (1) These Scholarships are open to Women.
(2) Half-a-day of Laboratory Work will be taken as equivalent to a Lecture.

COLLEGE SCHOLARSHIPS.

The following College Scholarships will be competed for in September and October, 1883:—

Three General Scholarships of the value of £25, £15, and £10 respectively, tenable for one year, open to men and women.

One Chemical Scholarship of the value of £25, tenable for one year, open to men and women.

Two Catherine Winkworth Scholarships of £15 each, tenable for one year, open only to women who have not held a Scholarship at the College for more than one year.

The subjects of Examination will be:—

CHEMISTRY (including Laboratory Work).
ARITHMETIC.
EUCLID.
ALGEBRA.
TRIGONOMETRY.

Conics (Geometrical and Analytical).
Differential and Integral Calculus.
Applied Mechanics.
Geometrical Drawing (Plane and Solid).
Machine Construction and Drawing.
Heat, Sound and Light.
Electricity and Magnetism.
Geology and Physical Geography.
Zoology and Palæontology.
Botany, Structural and Physiological.
Political Economy.
Moral Philosophy.
English History, from the accession of Henry II. to the death of Edward I.
English Literature, from the birth of Addison to the death of Pope.
Greek Language, Literature and History.
Latin Language, Literature and History.
French Language and Literature.
German Language and Literature.

Candidates will be allowed to enter in as many of the above subjects as they choose. Twenty per cent. of the full marks in each subject will be deducted from the marks obtained by each candidate before adding them up to form the total of the candidate's marks. Information as to the full marks for each subject can be obtained on application to the Principal.

Candidates must send in their names and lists of subjects not later than Wednesday, the 19th September, to the Registrar and Secretary of University College, Bristol. The minimum age is fixed at sixteen. The successful candidates must be prepared to show certificates of birth, and give references if required.

The Examination will begin at ten o'clock on Friday, the 28th September.

The Chemical Scholarship will be awarded principally by the marks obtained in Chemistry; but in case the marks obtained in it by the best candidates are nearly equal, account will be taken of their marks in other subjects.

The Chemical Scholar will in general be required to work in the Laboratory for six days a week during the Session 1883-84. Every other Scholar will be required to attend at least two courses of lectures, in the day time, in each of the three Terms of the Session.

ORDINARY CERTIFICATES.

Any student who diligently attends a course of instruction in any subject during a Session, and obtains a place in the first or second class in the Examination at the end of the course, shall be entitled to receive a certificate from the College. This regulation does not apply to Elementary Classes in Languages.

HONOUR CERTIFICATES.

1. An *Honour Certificate* shall be granted, after examination by an External Examiner, in conjunction with the Professor or Lecturer of the subject, to any student of the College who has diligently attended a course of instruction in any one of the subjects specified below, for three hours a week during three Terms, or two hours a week during four Terms:—

GROUP I.

Inorganic Chemistry.
Organic Chemistry.
Pure Mathematics.
Applied Mathematics.
Engineering, Part I. (viz., the Theory of Structures and Mechanical Drawing).
Engineering, Part II. (viz., Geometrical Drawing, and either the Theory of Machines or Surveying).
Physics.
Geology.
Zoology.
Botany.

GROUP II.

Political Economy.
Logic.
Moral Philosophy.

GROUP III.

Modern History.
English Language and Literature.
Greek Language and Literature.
Latin Language and Literature.
Greek and Roman History.
French Language and Literature.
German Language and Literature.

2. Candidates for Honour Certificates before proceeding to examination must obtain the consent of the Principal, who will provide them with a form of admission to the examination. These forms must be sent to the Registrar on or before the 15th May, except in the case of candidates for certificates in Inorganic Chemistry and Engineering, whose forms must be sent in not later than the 15th February.

3. *Times of Examination.* The Examination for Certificates will in general be held at the end of June, except in Inorganic Chemistry and Engineering, in which subjects the Examination will be held at the end of March.

4. *Fees for Examination.* Each candidate shall pay 10/– for examination in each subject.

ASSOCIATESHIPS.

1. The title of Associate of University College, Bristol, will be conferred on all candidates who—

A.—Shall have diligently attended an amount of instruction in the College equivalent to three courses of three hours a week each in each of three Terms during two Sessions; and shall have obtained a certificate of satisfactory conduct; and

B.—Shall have obtained some one of the four following distinctions, namely—

(i) College Honour Certificates in four subjects, not more than three of which are in any one Group, provided that if three of them are in Group III. one of them be Latin;

(ii) A certificate, granted by the Examiners and approved by the Council, of having produced an essay or original investigation of exceptional merit, together with Honour Certificates in three subjects;

(iii) The degree of B.A., B.Sc., M.A., M.D. or M.S. of some University in the United Kingdom; or

(iv) Such distinction in the Oxford University Examination for Women or the Cambridge University Higher Local Examination as from time to time shall be considered sufficient.

NOTE.—For the present a class in Honours in each of two sections of the second part of the Oxford Examination will be considered sufficient; or a first class in each of two of the four Groups B, C, D, E of the Cambridge Examination and a second class in a third group.

2. The title of Associate in Engineering shall be granted, on application, to all candidates who have complied with condition A and who obtain an Honour Certificate in Engineering, Part I., and in Engineering, Part II., and in three of the subjects Pure Mathematics, Applied Mathematics, Physics, Geology, and Chemistry; provided that one at least of his certificates be in Pure or Applied Mathematics.

3. The title of Associate in Chemistry shall be granted, on application, to all Candidates who have complied with condition A, and who obtain Honour Certificates in Inorganic and in Organic Chemistry, and in either Pure Mathematics or Physics; and who pass satisfactory examinations in Qualitative and Quantitative Analysis.

4. Associates shall be entitled to admission to such lectures and on such terms as the Council shall from time to time direct.

NOTE.—For the present they shall be admitted free to all day lectures.

5. The Council may elect, on the recommendation of the Educational Board, former students of the College who, though not possessed of the foregoing qualifications, shall have distinguished themselves in Literature, Science or Art, or in some career of public usefulness; provided that no person shall be so recommended within seven years after he has first entered as a Student.

6. Every Associate shall hold his Associateship and enjoy its privileges subject to the rules and regulations for the time being in force in the College, and may be deprived of it by the Council on the recommendation of the Educational Board.

LIBRARY.

A small Library is attached to the College for the use of past and present Students. Application for reference to or for the loan of books should be made at the Registrar's office.

GIFTS.

The following gifts have been received during the Session 1882-83:—

A Binocular Microscope, fitted with rotating stage and mechanical sub-stage, eye pieces, object glasses and other fittings, from Samuel Sherring, Esq.

Grant of Telegraphic Apparatus from the Post Office Department.

Specimens of Lead Ore, &c., from A. J. B. Weston, Esq.

Specimens illustrating manufacture of Soap, from Messrs. C. Thomas and Bros.

Specimens of Iron and Steel Testing Machines, from E. Barrow, Esq., Brussels.

Specimens of Wood, from Messrs. Hall and Gale.

Specimens of Coal, from W. Fiddes, Esq., Manager of the Gas Works.

Transactions and Proceedings of the Cambridge Philosophical Society, from the Council.

Minutes of Proceedings of Institute of Civil Engineers.

Transactions of Society of Engineers.

Annual Reports of Aeronautical Society (from the commencement).

Etude sur le Rivetage, from E. Barrow, Esq., Brussels.

Donation of £10 from the Medical Dramatic Club, for the purchase of Medical Books for the College Library.

Donations of Plants, Shrubs, and Seeds for the Botanical Garden have been received from Messrs. Garaway and Co., C. E. Broome, Esq., C. Harding, Esq., O. Gibbs, Esq., L. W. Rogers, Esq., H. H. Townsend, Esq., G. H. Wollaston, Esq., A. Leipner, Esq., — Cranston, Esq. (Hereford, per Miss Luck), and from the Clifton College Botanical Garden.

Five Hundred Cast Iron Garden Labels from John Lysaght, Esq.

Engineering Models and Designs, from E. Walker, Esq., late Manager, Avonside Engine Works.

UNIVERSITY OF LONDON.

Abstract of the Regulations for Degrees in Arts and Science.

Matriculation.

Second Monday in January and third Monday in June. Candidates must have completed their sixteenth year. Fee, £2.

Subjects.—1. Latin; 2. Any two of the following languages:—(*a*) Greek, (*b*) French, (*c*) German, (*d*) either Sanskrit or Arabic; 3. The English Language, English History, and Modern Geography; 4. Mathematics; 5. Natural Philosophy; 6. Chemistry.

The June Matriculation Examination is held in University College, Bristol. Local fee, £1.

Intermediate Examination in Arts.

Third Monday in July. Fee, £5.

Subjects.—Mathematics; Classics; the Latin Language; History of Rome to the Death of Augustus; Greek; the English Language, Literature and History; the French or the German Language.

Bachelor of Arts Examination.

Fourth Monday in October. Fee, £5.

Subjects.—The following Branches of Knowledge; Branches I., II. and III. being compulsory, but an option being allowed between Branch IV. and Branch V.:—I. Latin, with Roman History; II. Greek, with Grecian History; III. *One* of the following Languages:—English, French, German, Italian, Arabic, Sanskrit; IV. Either *Pure* or *Mixed* Mathematics; V. Mental and Moral Science.

Master of Arts Examination.

First Monday in June. Fee, £10.

Subjects.—One or more of the following Branches of Knowledge:—I. Classics; II. Mathematics and Natural Philosophy; III. Mental and Moral Science, Political Philosophy, History of Philosophy, Political Economy.

Intermediate Literature Examination.

First Monday in June. Fee, £10.

Subjects.—1. The Greek and Latin Classic Authors; 2. Prose Composition in Greek, Latin and English; 3. Ancient History, and the History of Europe to the end of the Eighteenth Century.

Doctor of Literature Examination.

First Tuesday in December. Fee, £10. Candidates who have taken the Degree of M.A. in Branch II. or Branch III. are exempt from payment of the fee.

Subjects.—1. English Language, Literature and History; and any two of the following subjects, one of which must be either French or German:—2. French Language and Literature; 3. German Language and Literature; 4. Anglo-Saxon Language and Literature, with Icelandic Language and Literature; 5. Sanskrit Language and Literature; 6. Arabic Language and Literature; 7. Hebrew Language and Literature, with Syriac Language and Literature.

Intermediate Examination in Science.

Third Monday in July. Fee, £5.

Subjects.—Pure Mathematics; Mixed Mathematics; Inorganic Chemistry; Experimental Physics; General Biology.

Bachelor of Science Examination.

Third Monday in October. Fee, £5.

Subjects.—*Any three* of the nine following subjects:—I. Pure Mathematics; II. Mixed Mathematics; III. Experimental Physics; IV. Chemistry; V. Botany; VI. Zoology; VII. Animal Physiology; VIII. Physical Geography and Geology; IX. Mental and Moral Science.

Doctor of Science Examination.

Within the first twenty-one days of June. Fee, £10.

Subjects.—One or more of the following Branches of Knowledge:—

Physical Science.—I. Pure Mathematics; II. Mechanical Science; III. Astronomy; IV. Inorganic Chemistry; V. Organic Chemistry; VI. Electricity; VII. Magnetism; VIII. Physical Optics; Heat; Acoustics.

Biological Science.—IX. Animal Physiology; X. Comparative Anatomy; XI. Zoology; XII. Vegetable Physiology; XIII. Systematic Botany.

Geological and Palæontological Science.—XIV. Geology; XV. Palæontology.

Mental and Moral Science.—XVI. Psychology, Logic, Ethics.

Preliminary Scientific (M.B.) Examination.

Third Monday in July. Fee, £5.

Subjects.—Inorganic Chemistry; Experimental Physics; Botany and Vegetable Physiology; Zoology.

For further information with regard to these Examinations, the Examinations for Honours, and the various Prizes and Exhibitions offered for competition, see the Calendar of the University of London.

THE INSTITUTE OF CHEMISTRY.

Abstract of the Regulations for Admission to the Associateship.

To come into force in October, 1883.

On and after October 1st, 1883, every candidate for the Associateship will be required to produce evidence of the following qualifications:—

(1.) That he is not less than twenty-one years of age.

(2.) That he has passed satisfactorily through a course of three years' study in any of the Universities or chartered or incorporated Colleges or Schools previously approved by the Council, in the subjects of Theoretical and Analytical Chemistry, Physics and Elementary Mathematics.

(3.) That he has passed such Examinations in these subjects at such Universities, Colleges and Schools as the Council may from time to time direct, or that he has passed the Examinations of the Science and Art Department as prescribed by the Council.

Practical Examination.

Every candidate for the Associateship will be required to pass a Practical Examination in Analytical Chemistry as follows:—

(1.) Qualitative Analysis, in which the candidate's knowledge of the use of the Microscope and Spectroscope will be tested - - One day.

(2.) Quantitative Mineral Analysis, including Volumetric Methods - - - - - Two days.

(3.) Quantitative Organic Analysis, and Gas Analysis - - - - Two consecutive days.

This Examination will be held in some adequately appointed laboratory, under the personal supervision of an Examiner appointed by the Council.

University College, Bristol, has been approved by the Council as a centre for the Practical Examination.

Copies of the Regulations of the Oxford and Cambridge Local Examinations, the Examinations of the University of London, the Examinations of the College of Preceptors, and the L.L.A. Examination for Women of the University of St. Andrew's, may be obtained on application to the Registrar. The Regulations for the Examinations of the Science and Art Department and for Whitworth Scholarships are kept in the office for reference.

Department of Engineering and the Constructive Professions.

The instruction in this department is designed to afford a thorough scientific education to students intending to become Engineers, or to enter any of the allied professions, and to supplement the ordinary professional training by systematic technical teaching.

The courses for Civil Engineers, Architects and Surveyors, are intended to meet the generally acknowledged want of a preparatory training for one or two years before the usual entrance as articled pupil into an office. Pupils are now usually articled for the comparatively short term of three years, and this scheme possesses the advantage of utilising the interval between leaving school and entering the office. These particular courses extend throughout the whole Session; but the Summer Term of each year is specially devoted to subjects which involve field work and enable excursions to be taken to neighbouring works of construction illustrating the lectures.

It will be found that the detailed courses cover most of the ground of the examinations which are now held by the Royal Institution of British Architects, and to a rather less degree those which qualify for admission as a Student, Associate, or Fellow of the Surveyors' Institution.

The scheme of study for Mechanical and Electric Engineers is detailed under their respective headings.

Although the courses for the several branches of the profession are not obligatory, yet it is strongly recommended that they be taken as hereafter detailed, and a substantial reduction is made in the case of students who take the complete course. Any reasonable change or modification which a student may desire will be made upon application.

The Principal, or Professor Thompson, or Professor Shaw, will be ready to give advice to students intending to join any of the courses.

COURSE FOR STUDENTS INTENDING TO BECOME CIVIL ENGINEERS OR SURVEYORS.

TIME TABLE.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.		
First Year.	Chemistry, 9—10. Engineering, 10—11. Eng. Drawing, 2—4.	Mathematics, 10—11. Physics, 12—1.	Chemistry, 9—10. Engineering, 10—11. Eng. Drawing, 2—4.	Mathematics, 10—11. Physics, 12—1.	Chemistry, 9—10. Engineering, 10—11. Eng. Drawing, 2—4.	Chemistry, 9—10. Mathematics, 10—11.	First and Second Terms.	
	Engineering, 10—11.	Mathematics, 10—11. Physics, 12—1.	Engineering, 10—11. Surveying, 2—5.	Mathematics, 10—11. Physics, 12—1.	Engineering, 10—11. Surveying, 2—4.	Mathematics, 10—11.	Third Term.	
Second Year.	Eng. Drawing, 2—4. Geology, 4—5.	Mathematics, 10—11. Engineering, 11—12.	Eng. Drawing, 2—4. Geology, 4—5.	Mathematics, 10—11. Engineering, 11—12.	Eng. Drawing, 2—4. Geology, 4—5.	Mathematics, 10—11. Engineering, 11—12.	First & Second Terms.	
	Lithology, 11—1. Chem. Laboratory, 2—5.	Mathematics, 10—11. Engineering, 11—12. Surveying, 2—4.	Lithology, 11—1. Chem. Laboratory, 2—5.	Mathematics, 10—11. Engineering, 11—12. Surveying, 2—4.	Chem. Laboratory, 2—5.	Mathematics, 10—11. Engineering, 11—12.	Third Term.	

FEES.—The compounded fees for the above courses are:—First year's course, 25 guineas; second year's course, 26 guineas.

Students while attending this course are eligible to be enrolled as Students of the Institution of Civil Engineers; and may then compete for the Miller Scholarship (value £40 per annum, tenable for three years) and the Miller prizes, which are awarded for original papers.

The following local Civil Engineers have expressed their approval of the course of instruction given in this Department. They also recommend it as a suitable preparation for persons intending to enter their offices as articled pupils, and in this capacity they will, if convenient, receive students of the Civil Engineering Department of the College:—

Mr. Frederick Ashmead, Local Board of Health, Bristol.
Mr. H. Percy Boulnois, City Surveyor, Exeter.
Mr. Francis Fox, Great Western Railway, Bristol.
Mr. F. B. Girdlestone, Bristol Docks.
Mr. James Henderson, Truro.
Mr. Thomas Howard, Bristol.
Mr. Ingliss, Great Western Docks, Plymouth.
Messrs. Thomas and William Morgans, Bristol.
Mr. Charles Richardson, Bristol. Severn Tunnel.
Mr. T. J. Scoones, Bristol.
Mr. Thomas Waring, Cardiff.

COURSE FOR STUDENTS INTENDING TO BECOME ARCHITECTS.

This course has been prepared for reasons (already stated) which apply also to Civil Engineering, but it is felt that the increasing use of iron in structures necessitates instruction specially bearing on this subject. A special course of lectures is given on the History of Architecture; and also on the theoretical and practical treatment of the Science of Building.

Time Table.

Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.	
Engineering, 10—11. Build. Construction, 2—4.	Architecture, 9—10. Mathematics, 10—11. Geom. Drawing, 2—4.	Engineering, 10—11. Build. Construction, 2—4.	Architecture, 9—10. Mathematics, 10—11. Geom. Drawing, 2—4.	Engineering, 10—11. Build. Construction, 2—4.	Mathematics, 10—11.	First and Second Terms.
Engineering, 10—11.	Architecture, 9—10. Mathematics, 10—11.	Engineering, 10—11. Surveying, 2—5.	Architecture, 9—10. Mathematics, 10—11.	Engineering, 10—11. Surveying, 2—4.	Mathematics, 10—11. Arch. Excursion, (afternoon).	Third Term.

FEES.—The compounded fee for the above course is 26 guineas.

The above course covers most of the ground in which examinations have now to be passed by any individual before he can be admitted as Associate or Fellow of the Royal Institute of British Architects.

The following local Architects give their hearty support to the scheme, to which they attach considerable importance. They are, moreover, prepared to receive students who have passed satisfactorily through this course into their offices as pupils on more favourable terms than those without such preparatory training:—

Mr. E. W. Barnes.
Mr. W. L. Bernard.
Mr. J. Bevan.
Mr. Stuart Colman.
Mr. Henry Crisp.
Mr. E. Henry Edwards.
Messrs. Foster and Wood.
Mr. W. Bruce Gingell.
Mr. Charles F. Hansom.
Mr. H. C. M. Hirst.
Mr. W. Edward Jones.
Mr. Henry Masters.
Mr. J. C. Moncrieff.
Messrs. Philip Munro and Son.
Messrs. Pope and Paul.
Mr. T. J. Scoones.
Mr. Josiah Thomas.
Mr. Vincent W. Voisey.
Mr. Henry Williams.
Mr. F. W. Wills.

COURSE OF MECHANICAL ENGINEERING DURING SIX WINTER MONTHS.

TIME TABLE.

Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.	
Chemistry, 9—10. Engineering, 10—11. Eng. Drawing, 2—4.	Mathematics, 10—11. Physics, 12—1.	Chemistry, 9—10. Engineering, 10—11. Eng. Drawing, 2—4.	Mathematics, 10—11. Physics, 12—1.	Chemistry, 9—10. Engineering, 10—11. Eng. Drawing, 2—4.	Chemistry, 9—10. Mathematics, 10—11.	First Year.
Physics, 11—12. Eng. Drawing, 2—4.	Mathematics, 10—11. Engineering, 11—12. Geom. Drawing, 2—4.	Physics, 11—12. Eng. Drawing, 2—4.	Mathematics, 10—11. Engineering, 11—12. Geom. Drawing, 2—4.	Physics, 11—12. Eng. Drawing, 2—4.	Mathematics, 10—11. Engineering, 11—12.	Second Year.
Mathematics, 10—11. Engineering, 12—1. Eng. Drawing, 2—4.	Phy. Laboratory, 10—1. Geom. Drawing, 2—4.	Mathematics, 10—11. Engineering, 12—1. Eng. Drawing, 2—4.	Phy. Laboratory, 10—1. Geom. Drawing, 2—4.	Mathematics, 10—11. Engineering, 12—1. Eng. Drawing, 2—4.		Third Year.

FEES.—The compounded fee for the above courses is for each year £20.

During the six summer months students of this course enter Engineering Works, and in accordance with this scheme the following Manufacturing Engineers in the neighbourhood have consented, at the request of the Council, to receive students of the College into their offices and workshops during the summer months as articled pupils:—

The Bristol Wagon Works Co. Limited.
Messrs. Bush and de Soyres, Bristol.
Messrs. Cox and Co., Shipbuilders, &c., Falmouth.
Messrs. Ellacott and Son, Plymouth.
Messrs. Fielding and Platt, Atlas Iron Works, Gloucester.
The Isca Foundry Co., Newport, Mon.
Messrs. John Lysaght Limited, Bristol.
Messrs. Newall and Ogilvie, Bristol.
Messrs. Spencer and Gillett, Melksham, Wilts.
Messrs. G. K. Stothert and Co., Bristol.
Messrs. Stothert and Pitt, Bath.
The Uskside Co., Newport, Mon.
Messrs. John Watts and Co., Bristol.
Messrs. Willoughby Brothers, Plymouth.

Engineering students can obtain a statement of the premium required on application to the Registrar and Secretary, and any further information from the respective firms.

Students who have passed through this course are by the new regulations eligible to compete for the Whitworth Scholarships, since these regulations, an abstract of which is appended, require that any candidate must have worked at least six consecutive months in each of three years in some Engineering Works.

ABSTRACT FROM THE REGULATIONS

FOR

WHITWORTH SCHOLARSHIPS.

The Whitworth Scholarships are of the value of £200, £150 and £100, and they are open for competition to any of Her Majesty's subjects under twenty-six years of age on the 1st May. Candidates must have been engaged in handicraft for at least three years, and have been at work at the vice and lathe, or the forge, or the bench, for at least six consecutive months in each of those years. They must have spent at least twelve months at the vice and lathe.

The competition will be in the following subjects:

Practical geometry.	Sound, light and heat.
Machine drawing.	Magnetism and electricity.
Building construction.	
Naval architecture.	Inorganic chemistry.
Mathematics.	Metallurgy.
Theoretical mechanics.	Steam.
Applied mechanics.	Freehand drawing.

The maximum number of marks obtainable in most of the subjects will be, in the

Elementary stage - -	100
Advanced stage - -	200
Honours - - - -	400

No candidate can obtain a Scholarship who has not passed in the second stage, or "honours," of practical geometry; and in the second or third stage, or the "honours" of those stages of mathematics; and obtained a first class in the first stage, or passed

in the second stage, or "honours" of theoretical mechanics; and obtained a "good" in freehand drawing.

No candidate can obtain a Scholarship who has not attained sufficient handicraft power. And if thought necessary by the Department this may be tested by requiring him to make two Whitworth screw bolts, 1-in. in diameter, and 4 to 6 ins. long, with hexagonal heads and nuts, alike within ·001 in.

Sir Joseph Whitworth will allow the scholars to attend his works at Manchester free of cost.

Candidates must apply to the Science and Art Department, *before the 15th March.* Write for Science Forms, Nos. 90 and 330.

Further particulars may be obtained from the Whitworth Prospectus, price 3d., for which apply to the Secretary, Science and Art Department, South Kensington, London, S.W.

Students of University College, Bristol, intending to compete for Whitworth Scholarships should send their forms to the Registrar, not later than Saturday, the 8th March.

COURSE OF ELECTRIC ENGINEERING.

The course for Electric Engineers extends over three years, and includes a number of the subjects of the general Engineering course, together with courses in Electricity and Magnetism, and their technical applications to Electric Lighting and Transmission of Power, Telephones and Telephonic Systems, Telegraphy, Electro-plating, &c. Courses of practical instruction in the Electrical Laboratory are also arranged for students of this branch.

First Year.						
First and Second Terms.						Third Term.
Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.	
Chemistry, 9—10. Engineering, 10—11. Chem. Laboratory, 2—5.	Mathematics, 10—11. Physics, 12—1. Geom. Drawing, 2—4.	Chemistry, 9—10. Engineering, 10—11. Chem. Laboratory, 2—5.	Mathematics, 10—11. Physics, 12—1. Geom. Drawing, 2—4.	Chemistry, 9—10. Engineering, 10—11. Chem. Laboratory, 2—5.	Chemistry, 9—10. Mathematics, 10—11.	
Elec. Laboratory, 10—1. Chem. Laboratory, 2—5.	Mathematics, 10—11. Physics, 12—1. Workshop, 2 - 4.	Elec. Laboratory, 10—1. Chem. Laboratory, 2—5.	Mathematics, 10—11. Physics, 12—1. Workshop, 2—4.	Elec. Laboratory, 10—1 Chem. Laboratory, 2—5.	Mathematics, 10—11.	
Physics, 11—12. Eng. Drawing, 2—4.	Mathematics, 10—11. Engineering, 11—12. Elec. Laboratory, 2—5.	Workshop, 9—11. Physics, 11—12. Eng. Drawing, 2—4.	Mathematics, 10—11. Engineering 11—12. Elec. Laboratory, 2—5.	Workshop, 9—11. Physics, 11—12. Eng. Drawing, 2—4.	Mathematics, 10—11. Engineering, 11—12.	
Physics, 11—12. Elec. Laboratory, 2—5.	Mathematics, 10—11. *Tech. Physics, 2—3. Workshop, 3—5.	Physics, 11—12. Elec. Laboratory, 2—5.	Mathematics, 10—11. *Tech. Physics, 2—3. Workshop, 3—5.	Physics, 11—12. Elec. Laboratory, 2—5.	Mathematics, 10—11.	
Mathematics, 10—11. Engineering, 12—1. Workshop, 2—4.	Elec. Laboratory, 10—5.	Mathematics, 10—11. Engineering, 12—1. Physics, 2—3.	Elec. Laboratory, 10—5.	Mathematics, 10—11. Engineering, 12—1. Physics, 2—3. Workshop, 3—5.		
Mathematics, 10—11. Workshop, 2—4.	Elec. Laboratory, 10—5.	Mathematics, 10—11. Elec. Laboratory, 11—5.	Elec. Laboratory, 10—5.	Mathematics, 10 11. Workshop, 2—4.		

Second Year.		Third Year.	
First & Second Terms.	Third Term.	First & Second Terms.	Third Term.
Mathematics, 10—11. Physics, 11—12. Engineering, 11—12.			
Physics, 11—12. Elec. Laboratory, 2—5.	Mathematics, 10—11.		

* In lieu of Physics.

FEES.—The compounded fees for the above courses are:—First year's course, 31 guineas; second year's course, 28 guineas; third year's course, 26 guineas.

Day Lectures.

GENERAL REGULATIONS.

(1.) Persons under the age of 16 years seeking admission as day students will be required to pass an entrance examination in English Grammar and Composition, and in Elementary Mathematics. This examination will in general be held on the first day of Term, but any candidate who desires to be admitted to it must give two days' notice.

(2.) The Principal will attend at the College for the purpose of admitting students at the beginning of each Term.

(3.) Every candidate for admission may be required to produce such testimonial of good character as shall be satisfactory to the Principal.

(4.) Every student on admission must sign an undertaking to observe all the regulations affecting students made by the Council of the College for the time being.

(5.) Every student must obtain a card of admission to the classes which he enters. This is issued by the Registrar and Secretary, on the presentation of a certificate signed by the Principal, and on payment of the fees. No student is entitled to attend the classes until he has complied with this regulation. The first lecture of every course will however be free.

(6.) A record will be kept of the attendance of students. A report of the attendance of any student will be periodically sent to his parents or guardians if they require it.

(7.) An entrance fee of 7s. is charged for each course, but all entrance fees may be compounded for by a single payment of a registration fee of £1 1s.

(8.) Disorderly conduct on the part of any student will be reported to the Principal, who will adopt such action thereon as he may deem necessary.

(9.) Every student is required to provide himself with a College Calendar.

The Council reserve to themselves the power of suspending any class, if there are not a sufficient number of entries.

FEES.

The fees are as a rule :—For a course of instruction of three or more hours a week, £5 5s. for three Terms, £4 4s. for two consecutive Terms, £3 3s. for the first or second Term singly, £2 2s. for the third Term. A few exceptions to this rule will be found in the statements of fees which are appended to the accounts given further on of the subjects of the several courses.

Day Lectures.

SUBJECTS OF INSTRUCTION.

CHEMISTRY.

Professor, W. Ramsay, Ph.D.

Lecturer, Sydney Young, D.Sc.

Inorganic Chemistry.

This course treats of the principles of Chemistry, and of the Chemistry of the Non-Metals and Metals.

Lectures will be given at nine o'clock on Mondays, Wednesdays, Fridays and Saturdays during the first and second Terms.

The lectures will be illustrated with experiments and diagrams.

Examinations will be held from time to time during the course.

Syllabus.

Principles of Chemistry.

Ancient and Modern Ideas of the Nature of Matter—Elements—Compounds and Mixtures—Synthesis and Analysis—Laws of Chemical Combination—Properties of Gases—Atomic Weights—Diffusion of Gases—Specific Heats—Molecular Weights—Specific Heat of Compounds—Specific Volumes of Liquids and Solids—Heat of Combination—Spectroscopy—Relations of Light and Electricity to Chemistry—Influence of Time and Mass on Chemical Processes.

Non-Metals.

The Non-Metals will be described in their order; their properties, and the properties of their compounds, and the relation subsisting between them will be shown.

Metals.

Periodic Law—All the more important metals and their salts will be described; together with the methods of extraction from their ores and the preparation of their compounds.

This course covers the subjects prescribed for the following Examinations of the University of London:—First Term, Matriculation; first and second Terms, Preliminary Scientific (M.B.), Intermediate Examination in Science, Intermediate Examination in Medicine. For the three latter examinations attendance at the Laboratory is also requisite; and for the Intermediate Examination in Science and the Intermediate Examination in Medicine, the lectures on Organic Chemistry should be attended.

Text-books.—Roscoe and Schorlemmer's *Treatise on Chemistry;* Thorpe's *Inorganic Chemistry;* Fowne's *Manual of Inorganic Chemistry;* Miller's *Elements of Chemistry;* Thorpe's *Chemical Problems.*

Fee, £4 4s. for two Terms, £3 3s. for one Term.

SPECIAL LABORATORY COURSE.

Special instruction will be given on Tuesdays and Thursdays from 4 to 6 during the first and second Terms. The course is designed for students entering for elementary examinations in Chemistry, and others to whom the hour may prove convenient.

Fee, £3 3s. for two Terms, £2 2s. for one Term.

ORGANIC CHEMISTRY.

This course will relate to the more important groups of the Compounds of Carbon.

Lectures will be given during the second Term on Tuesdays and Thursdays at nine o'clock: during the third Term on Tuesdays, Thursdays and Saturdays at nine o'clock.

Students are recommended to take this course during the second year of their chemical studies, but, if necessary, they can take it during their first.

Syllabus.

History of the Chemistry of Carbon—Determination of the Composition of Carbon compounds—Empirical and Rational formulæ—Classification—Hydrocarbons—Alcohols—Carbohydrates—Aldehydes and Ketones—Acids—Simple and Compound Ethers—Compound Ammonias—Characteristics of Aromatic substances—Benzene and its derivatives—Napthalene and Anthracene and their derivatives—Pyridine, Chinoline, and their derivatives—Dyes—Alkaloids—Animal and Vegetable Educts.

Special Lectures.

The Paraffin Industry—Brewing and Distilling—Acetic Acid Manufacture—Soap Making and Candles—Sugar—Explosives—Artificial Colours and Dyes—The Alkaloids.

Text-books.—Armstrong's *Organic Chemistry;* Schorlemmer's *Chemistry of the Carbon Compounds;* Armstrong and Grove—*Vol. III. of* Miller's *Chemistry.*

Fee, £3 3s.

Advanced Course.

This course will be given on Saturdays at 9 o'clock during the first and second Terms, and will be devoted to a minute consideration of Chemical Theory, as shown in recent researches.

Fee, £2 2s.

Practical Chemistry.—Laboratory Instruction.

The Laboratory is open daily, from 10 a.m. to 5 p.m., except on Saturdays, when it closes at 1 p.m. Instruction is given in the Laboratory on all branches of Practical Chemistry, including Qualitative and Quantitative Inorganic and Organic Analysis, the preparation of Chemical Products, and Inorganic and Organic Research. Special facilities will be afforded to those who desire to study Practical Chemistry as applied to the different processes employed in the Arts and Manufactures, and in Scour-

ing, Bleaching and Dyeing. The Laboratory will be under the immediate supervision of the Professor and of the Lecturer.

Each student will be required to provide, at his own expense, a set of ordinary apparatus, at a cost of about 30s. Expensive apparatus, gas, fuel, water, and the ordinary reagents will be provided by the College. The cost of material for original research must be paid by the student.

FEES IN GUINEAS—

	The whole Day.					
	6 days a week.	5 days a week.	4 days a week.	3 days a week.	2 days a week.	1 day a week.
For the Session	17	15	13	10	7½	5
" two Terms	13	11	9	7½	5½	4
" one Term	7	6	5	4	3	2
" one Month	3	3	2	2	1½	

Students may for convenience arrange to divide their days of laboratory work into half-days.

EXCURSIONS.

In order that students may have an opportunity of acquiring some knowledge of Applied Chemistry, excursions to some of the Mines and Manufactories of the neighbourhood will occasionally be made. They will be conducted by the Professor or by the Lecturer. Past or present students of the College desirous of taking part in these excursions are invited to apply to the Professor of Chemistry.

MATHEMATICS.

Lecturer, EDWARD BUCK, M.A.

There will be two courses in this subject, comprising:

I.—AN ELEMENTARY COURSE in Arithmetic, Algebra, Euclid, Plane Trigonometry, Geometrical Conic Sections and Elementary Theoretical Mechanics.

These classes will be held on Mondays, Wednesdays and Fridays, from 12 to 1.

Additional classes will be held in these subjects on Mondays, Wednesdays and Fridays at 11, and on Tuesdays, Thursdays and Saturdays at 10, for those to whom these hours may be more convenient.

2.—An Advanced Course in Co-ordinate Geometry of Two and Three Dimensions, Spherical Trigonometry, the Differential and Integral Calculus, Differential Equations, Analytical Statics, the Dynamics of a Particle and of a system of Rigid Bodies, and Hydromechanics.

These classes will be held on Mondays, Wednesdays and Fridays at 10 o'clock.

In addition to the subjects given above, the Lecturer will read any other subjects in Pure or Applied Mathematics which may appear to him suitable to the wants of the students.

Fee, £5 5s. for each course for three Terms; £4 4s. for two consecutive Terms; £3 3s. for the first or second Term singly; £2 2s. for the third Term.

EXPERIMENTAL PHYSICS.

Professor, Silvanus P. Thompson, D.Sc., B.A.

Demonstrator, C. C. Starling.

Elementary Course. (first year).

Tuesday and Thursday, 12—1.

FIRST TERM.—MECHANICS, HYDROSTATICS, &c.

Laws of Velocity, Acceleration, Force and Work. Problems in Statics and Kinatics. Friction. Elasticity. Laws of Equilibrium of Liquids and Gases. The Air Pump. The Barometer. Capillarity, &c.

SECOND TERM.—HEAT.

Thermometry.—The effects of Heat on the mechanical properties of solids, liquids and gases. Expansion, apparent and absolute. Thermometers and Pyrometers. Absolute zero of Temperature. The Phenomena of Fusion, Crystallisation, Evaporation, Ebullition and Condensation. Artificial Freezing.

Calorimetry.—Specific Heat. Calorimeters. Latent or Potential Heat. Conduction of Heat. Thermochemistry.

THIRD TERM.—GEOMETRICAL OPTICS.

Velocity and Intensity of Light. Photometry. Laws of Reflexion, Refraction and Dispersion of Light. Formation of Images by Lenses and Mirrors. Calculation of Optical Combinations by Gauss's method. The Telescope. The Microscope.

This course covers the matter comprised in the subject of Natural Philosophy as prescribed for Matriculation in the University of London.

Text-books.—Lodge's *Elementary Mechanics* (W. and R. Chambers); Deschanel's *Natural Philosophy*, Vol. II., *Heat* (Blackie and Son); Aldis's *Geometrical Optics* (Deighton, Bell and Co.)

Fee, entire course, £4 4s.; two Terms, £3 3s.; one Term, £2 2s.

INTERMEDIATE COURSE. (SECOND YEAR).

Monday, Wednesday, Friday, 11—12.

Two lectures of this course will be delivered in each week during the Session. There will also be held one class each week for working problems and for supplementing the experimental work of the lectures.

The lectures will be delivered on Mondays and Fridays at 11 a.m.

FIRST TERM.—GENERAL PHYSICS, THERMODYNAMICS AND MAGNETISM.

General Physics.—Fundamental and Derived Units of Measurement. The Centimetre-Gramme-Second System. General Relations of Matter and Energy. Central Forces. Universal Gravitation. Theory of Potential.

Thermodynamics.—Joule's Equivalent. Laws of Heat-Transference. The Law of Conservation of Energy as a fundamental principle of Physics.

Magnetism.—Magnets, natural and artificial. The Compass and Dipping Needle. Measurement of Magnetic Forces. Terrestrial Magnetism. Diamagnetism.

SECOND TERM.—ELECTRICITY.

Electric Currents.—Mechanical, Thermal and Chemical Methods of Generating Electric Currents. The Voltaic Cell. Batteries. Galvanometers. Electromagnetism. Action between Magnets and Currents. Phenomena of Induced Currents. The Induction Coil. Dynamo-electric Machines. Measurement of Resistance and Electro-motive Force.

Electric Charges.—Fundamental Experiments on Electrostatic Attractions and Repulsions. Notions of Electric Quantity and Distribution. Phenomena of Induction. Electrical Machines. The Leyden Jar. Measurement of Potential, Capacity, and Quantity. Electrometers. Phenomena of Discharge.

Applications.—Chemical Actions of the Current. Electrolysis and Electroplating. Thermoeletricity. Heating effects of the Current. Electric Lighting. Arc Lights. Incandescent Lamps. Accumulators. Telegraphs, Telephones and Submarine Cables. Electro-motors and Electric Transmission of Power.

THIRD TERM.—ACOUSTICS, PHYSICAL OPTICS. RADIATION.

Sound.—Production and Propagation of Sound Waves. Velocity of Sound. Reflection of Sound. Phonoscopes and Phonographs. Vibrations of Rods, Strings and Columns of Air. Acoustical Interference. Physical Theory of Music. The Vowel Sounds.

Physical Optics.—The Wave Theory of Light. Phenomena of Interference and Diffraction. Double Refraction and Polarisation of Light. Calorescence. Chemical Actions of Light. Spectrum Analysis.

Radiation.—Dispersion of Light. The Spectroscope. Phosphorescence and Fluorescence. Radiation and Absorption of Heat-Rays. Theory of Exchanges.

The subjects of this course are arranged with a view to the requirements of the Intermediate Examination in Science of the University of London. Students attending the Engineering course may take the Electro-technical course in the third Term in lieu of Acoustics, &c.

Text-books.—The text-books which students are advised to purchase are S. P. Thompson's *Elementary Lessons in Electricity and Magnetism* (Macmillan and Co.), and Everett's edition of Deschanel's *Natural Philosophy*, Vol. IV., *Sound and Light* (Blackie and Son). The following works, most of which are in the College Library, are recommended for constant reference and reading:—Thomson and Tait's *Natural Philosophy;* Clerk Maxwell's *Theory of Heat;* Shann's *Heat;* Maxwell's *Elementary Treatise on Electricity;* Müller-Pouillet's *Physik;* Jamin and Bouty's *Cours de Physique;* Gordon's *Physical Treatise on Electricity and Magnetism.*

Fee, entire course, £5 5s.; two consecutive Terms, £4 4s.; first or second Term only, £3 3s.; third Term only, £2 2s.

ADVANCED COURSE. (THIRD YEAR).

Wednesday and Friday, 2—3.

An Advanced Course of about forty lessons on Physics treated mathematically and experimentally will be given during the first and second Terms

on Wednesdays and Fridays at 2. The course will comprise the following subjects:—

Heat.—The Laws of Temperature and of Specific and Latent Heat. The Laws of Conduction of Heat. The Laws of the Transformation of Heat. Thermodynamics. The Experimental Determination of Joule's Equivalent, of the ratio of the two specific heats of gases and other thermodynamic constants. The Kinetic Theory of Gases.

Electricity and Magnetism.—The Laws of Electrostatics. The Laws of Magnets and Electromagnets. Measurement of Electrical Quantities. Construction of Electrical Standards. The Laws of the Distribution of Electric Currents, and of the Transmission of Electric Energy. Choice of Electric and Magnetic Units. Ratio of the two Systems of Units. The Electromagnetic Theory of Light.

The subjects comprised in this and the preceding course cover those prescribed for candidates in Physics for the degree of Batchelor of Science in the University of London.

Fee, two Terms, £4 4s.; one Term, £3 3s.

ELECTRO-TECHNICS.

Professor, SILVANUS P. THOMPSON, B.A., D.Sc.

Tuesday and Thursday, 2—3.

This course will be delivered during the third Term.

SYLLABUS.

Dynamo-electric Machines.—Design and Construction of Armatures and Field Magnets. Arrangements for regulation of Velocity, Current and Potential.

Incandescent Lamps.—Theory of construction and use.

Arc Lamps.—Construction of Regulators. Electric Candles. Accessories, Cut-outs, Shunts, &c.

Electric Motors.—Design, construction and regulation. Electric Transmission of Power. Electric Railways.

Accumulators.—Theory of the various types.

Telegraphic and Telephonic Engineering.—Chief types of Instruments. Construction and testing of Lines.

Standard Electrical Instruments.—Theory, construction and use.

Fee, £2 2s.

PHYSICAL LABORATORY.

PRACTICAL PHYSICS.—LABORATORY INSTRUCTION.

The Physical and Electrical Laboratory is open daily from 10—5, except on Saturdays.

A general course of Laboratory Instruction will be carried on under the immediate supervision of the Professor and of his Demonstrator. The object of this course is to provide students with the means of acquiring skill in the use of the instruments of physical measurement and research, and a knowledge of physical experimenting in general. The course includes the practical verification of the more general laws of physics, including acoustics, optics, heat, magnetism and electricity.

A special course of instruction in Electricity will be given to students working in the *Electrical Laboratory*. They will be instructed in the principles and practice of Electric Testing, in the measurement of Electromotive Force, Resistance, Electric Energy, and in the efficiency of Electric Machinery. Instruction will also be given in the management and testing of Dynamo-electric Machines, Electric Arc Lamps and Incandescent Lamps, and in the management and construction of Electric Instruments and Appliances in general use.

FEES IN GUINEAS—

	The whole day.				
	5 days a week.	4 days a week.	3 days a week.	2 days a week.	1 day a week.
For the Session	18	15	11½	8½	5
" two Terms	13	11	8½	6	4
" one Term	7	6	5	3½	2

Students may for convenience arrange to divide their days of laboratory work into half-days.

ENGINEERING.

Professor, H. S. Hele Shaw.

First Year.

Monday, Wednesday and Friday, 10—11.

First Term.—*Experimental Course of Elementary Mechanics.*—Definitions, measurement, and laws of Motion, and the cause of Motion. The principles of work and its application to Machines. The centre of Inertia and its properties. The equilibrium of bodies at rest and in motion. Experimental investigation of the laws of Friction. Brakes and Friction Pullies and Clutches. Contrivances for reducing the effect of Friction. Principle and applications of the Screw. The preparation of truly Plane Surfaces, and the method of end measurement. Elements of Hydro-mechanics. The pressure of water on dock-gates, walls and embankments. Lifting and Force Pumps. The Hydraulic Press and Hydraulic Cranes and Motors. The laws of floating bodies. The pressure of air. Compression and Exhaust Pumps. Pressure and Vacuum Guages.

Second Term.—*Nature and Strength of Materials and Structures.*—Meaning of terms Stress, Strain, Factor of Safety, Resilience, &c. Nature of the loads to which a structure is subjected. Classification of framed Structures or Trusses. Condition of equilibrium of a structure. The elements of Graphic Statics. Reciprocal Diagrams of Forces and of

Stresses. The Funicular Polygon. Graphical Solution of various examples of Roof and Bridge Trusses. The nature of internal resistance of various parts of a structure. Live and dead loads. Fatigue of materials. Testing Machines. Timber. Cast Iron and Castings. Wrought Iron and its uses. The hardening and tempering of Steel. Other metals and different kinds of alloys. Simple calculations connected with the design of Beams and Girders. Beams of uniform strength. Strength of Columns and of Structures subjected to internal pressure.

Third Term.—*Civil Engineering.*—Preservation of Timber. Artificial Stones and Hydraulic Cements. Brickwork. Masonry. The stability of Walls and Buttresses. Sub-structure and Foundations. Piles and Pile Driving. Cofferdams. Common Roads; Material, Construction, Maintenance and Draining. Stone, Wood and Asphalt Pavement. Railways; Broad and Narrow Guage. Different kinds of Rails, their wear and cost. Switches and Crossings. Tunnels and Embankments. Tramways, the different systems of horse and steam traction. Classification of Canals. Laying out and construction of Locks. Foreign Canals. Streams and Rivers. Measurement of Velocity at different cross sections. Floods. Different kinds of facings for Banks. Construction of Dams and Weirs. Marine Engineering. Sea Defences and Embankments. Breakwaters. Piers. Harbours. Docks. Supply of Water to Towns. Rain, spring, well and river water. Mode of distribution of water supply. Draining of Lands and Towns. Reclamation and Irrigation of Land.

During the first and second Terms students will be expected to work at home easy numerical and graphical problems, which will be set at each lecture.

Text-books.—First Term, Goodeve's *Principles of Mechanics.* Third Term, Law and Burnell's *Civil Engineering.*

The following works may be consulted with advantage:—First Term, Ball's *Experimental Mechanics.* Second Term, Bow's *Economics of Construction*, and Stoney's *Theory of Strains in Girders.*

Second Year.

Tuesday, Thursday and Saturday, 11—12.

First Term.—*Prime Movers.*—(1.) Sources of Energy in Nature. The relative values of Fuel, Wind, Rainfall and the Tides for motive power. General considerations concerning the change of energy from one form to another. Efficiency of a Motor. (2.) Machines for utilising the muscular power of men and animals. (3.) Theory of Heat Engines. (4.) Construction of Furnaces, and devices for effecting economical combustion. Transfer of heat from the Furnace. (5.) Nature and properties of Steam. The investigations of Watt and Regnault. Steam Boilers. The expansion of Steam in the cylinder. Indicators and indicator diagrams. The inventions of Savary, Newcomen and Watt. Varieties of Engines, stationary, locomotive and marine. Compound Engines. The Pulsometer and Injector. (6.) Hot Air Engines. The inventions of Stirling and Ericsson, their advantages and disadvantages. Modern improvements in Hot Air Engines for purposes of small power. (7.) Gas Engines. Early failures and modern improvements.

Second Term.—*Theory of Machines.*—History of the Science. Definition of a Machine. Pairs of Elements. Kinematic Links and Chains. Force and pair Closure. Centroids and Axoids. Higher pairs of Elements. The notation and symbols of Reuleaux. Formulas of the simple machines and of various other mechanisms. Various examples of the Quadric Crank Chain found in Parallel and Straight Line motions, Sewing Machines, Printing and Engraving Machines, Shearing Machines, Power Looms, Reversing and Quick Return motions, etc. Various examples of the Slider Crank Chain in prime movers and other machines. Chamber Crank Trains and Chamber Wheel Trains. The theory of Toothed Wheels. Bevil and Screw Gearing. Wheels in

Trains. Epicyclic Trains. Differential Screw and Pulley. Ropemaking and other machinery. Apparatus for measuring and for regulating the rate of motion, such as, Escapements of Clocks and Watches, and Governors.

Third Term.—*Civil Engineering*.—The subjects dealt with in the first and second Terms of the First Year will be treated more fully.

(1.) Stability of retaining Walls and Earthwork. Theory of the Arch. Skew Arches. Problems connected with Beams and Girders. Beams of greatest strength for different kinds of loading. Graphic means of finding deflection. Continuous Girders. Weight of Girders and limiting span. Cast Iron Bridges. Different forms of Suspension Bridges. Movable and Swing Bridges. The employment of Steel for the construction of Bridges.

(2.) Acts of Parliament and other regulations affecting Railways. Details of Permanent Way. Ruling Gradients. Signals. The Block system. Rolling Stock. Works of Inland Navigation. Tidal and Coast Works.

Text-books.—Third Term, *Civil Engineering*, Rankine. *Railway Appliances*, Barry.

The following works may be consulted with advantage:—*The Steam Engine and other Prime Movers*, Rankine. *The Steam Engine*, Goodeve. *Reuleaux's Kinematics of Machinery* (translated and edited by Professor Kennedy). *Elements of Mechanism*, Goodeve.

Third Year.

Monday, Wednesday and Friday, 12—1.

First Term.—This course will treat of the more difficult portions of the subjects of the second year.

Hydraulics.—The Collection and Supply of Water for Power. The height, extent and curve of Swell or Backwater. Reservoirs and Reservoir Sluices. Motion of Water in Conduit Pipes. Theory of

Overshot and other forms of Vertical Water Wheels, with a discussion of the questions of radius, crown and width of wheel, number of floats, entrance angle, effect of pressure and impulse of water and of centrifugal force. Friction of Water Wheels. Total and effective delivery. Theory of various forms of Horizontal Wheels, including Impact and Tub Wheels, Tangential Wheels, Jet Turbines, Reaction Wheels, Inward, Parallel, Outward-flow and Screw Turbines. Water pressure engines. Ordinary Regulators and other Valves. Hastie's and other automatic Regulators. The theoretical efficiency of water pressure engines and experimental results. Various forms of Windmills, and their mechanical effect.

Second Term.—*Heat Engines.*—Relations amongst the Phenomena of Heat. The efficiency of a Heating Surface. Draught of Furnaces and height of Chimney. Efficiency of Furnace. Liquid fuel. Various forms of Boilers, Furnaces and Boiler appendages. The second law of Thermodynamics. Thermodynamic function or entropy. Equations of Energy and Work. The properties of Steam. Isothermal and Adiabatic curves. Theory of Compound Engines. The theory of the Gas Engine. Various forms of Gas Engines, and their respective efficiencies. Various forms of Governors. The Measurement of Work by Indicators and Dynamometers. The methods now adopted for testing and estimating the efficiency of Engines.

Opportunity will be afforded for taking Indicator Diagrams and other data from engines at neighbouring works and factories.

Text-book.—*Mechanics of Engineering*, Weisbach (Wiley and Sons, New York).

Works for reference.—*The Steam Engine*, Cotterill; *The Steam Engine and other Prime Movers*, Rankine. Various Papers in Minutes of Proceedings Inst. C. E. (in the College Library).

Fee, £7 7s. for three Terms; £5 5s. for two consecutive Terms; £3 3s. for a single Term.

Workshop.

The workshop is open to Engineering Students, and instruction is given during the hours stated in the Time Tables at page 33.

Fee, £4 4s. for three Terms; £3 3s. for two Terms; £2 2s. for one Term.

ENGINEERING DESIGN AND BUILDING CONSTRUCTION.

Professor, H. S. Hele Shaw.

Monday, Wednesday and Friday, 2—4.

First Year.

(1.) The preparations of tracings and finished drawings. Drawing to scale and from models and actual machines and portions of machines. (2.) Graphical modes of representing results. The working out of simple diagrams of stress in connection with the class in Engineering.

Second Year.

(1.) The design and drawing of various parts of machines from given data or from actual measurement. (2.) A course of lectures is also given on Machine Design, dealing with the following subjects: The strength of materials. The researches of Wöhler and Spangenberg and the formulas of Weyranch, Launhardt and others, based upon them. The strength and form of riveted joints. Bolts, keys and cotters. The strength of pipes and cylinders. Strength and delineation of tooth and screw gearing. Belt, rope and chain gearing. The strength of shafting, cranks, connecting rods, crossheads, &c. The form and dimensions of valves.

Third Year.

(1) Design and drawing of complete Machines from given data. The Theory of the Slide Valve and

Valve Diagrams. (2) Diagrams of Bending Moment and Shearing Stress in Beams and Girders. Graphic representation of the action of Stationary and Travelling Loads, of the centre of Parallel Forces and the moment of Inertia. Stress Diagrams of Braced Beams and Girders for Railway Bridges.

The courses will be given during the first and second Terms.

Text-books.—Second Year: *Elements of Machine Design*, W. C. Unwin (Longmans and Co.). Third Year: *Principles of Graphic Statics*, Sydenham Clarke (E. and F. N. Spon); *Treatise on Valve Gear*, Zeuner (E. and F. N. Spon).

Fee, £5 5s. for each year's course.

Instruction will also be given on these afternoons during the first and second Terms to students of the course on Architecture in Building Construction and Architectural Drawing.

Fee for the course, £5 5s.

GEOMETRICAL DRAWING.

Professor, H. S. Hele Shaw.

Tuesday and Thursday, 2—4.

A course of forty lessons in Plane Geometrical Drawing and the Application of Descriptive Solid Geometry will be given during the first and second Terms. The course of instruction will include the following subjects:—

Plane Geometry.—The Construction of Scales. The Description of Polygons. The Construction of the Ellipse, Parabola, Hyperbola, and other Curves which are the loci of points under given conditions. The transformation of Areas.

Solid Geometry.—The Representation of Points and Lines in Space, and also of Simple Solids upon a plane surface by Orthographic Projection. Use of Scales of Slope. Penetrations. Developments. Shadows. Isometrical Projection and the Elements of Radial or Perspective Projection.

Text-books.—Angel's *Practical Geometry and Projection* (Collins, Son and Co.); Sydenham Clarke's *Practical Geometry.*

Fee, for two Terms, £4 4s.; one Term, £3 3s.

SURVEYING.

Professor, H. S. Hele Shaw.

Elementary Course.

Wednesday, 2—5; Friday, 2—4.

This course will be given during the third Term. Wednesday afternoon will be devoted to practical instruction in the use of Surveying and Levelling Instruments, the keeping of Field Level Books, the demarcation of Survey points, and as soon as possible to *Field Practice* in the neighbourhood. Friday afternoon will be devoted to the theory of Surveying and to the plotting of the Field work.

Text-book.—*Land and Engineering Surveying*, T. Baker, C.E. (Weale's Series).

Fee, £3 3s.

Advanced Course.

Tuesday and Thursday, 2—4.

An advanced course will be given during the third Term on the above days in the theory and practice of Surveying and Levelling, including a discussion of the various methods of Surveying with Chain, Telemeter, Plane Table, Compass, Sextant and Theodolite; of Levelling operations and Contouring, and the sources of error in Levelling; of Setting out Embankments, Cuttings and Tunnels, and Ranging Curves for Railway work; of Route Surveys by land. Also the correction and adjustment of both Surveying and Levelling instruments.

An afternoon will be devoted once a fortnight to Field Practice.

Fee, £3 3s.

ARCHITECTURE.

Lecturer, W. Edward Jones.

Tuesday and Thursday, 9—10.

Syllabus.

First Term.—The combined Art and Science of Building—the influence of the Habits and Occupations of Man, the Climate and Materials obtainable, upon the Architecture of different Countries.

Outlines of the History and Progression of Architectural Style, with Drawings of the principal Buildings erected during the different periods of Ancient Art.

Introduction to Practical Building or Constructive Science.

Description of the various Materials used and the method of using them in the construction of ancient work; and the means employed to obtain similar results in modern times.

Second Term.—Egyptian, Greek and Roman Architecture will be more fully treated, with an introduction to the study of Christian Art or Pointed Architecture of the Middle Ages.

Drawings of the best examples of Ancient Architecture will be provided for the Students to copy.

During this course three Excursions will be arranged to visit the best specimens of Mediæval Architecture in the neighbourhood, when Sketches and Measured Drawings will be taken.

Building Construction—Stone and Brick Walls, Foundations, Piers, Arches and Vaults—Carpentry and the Framing of Timber in Roofs, Floors and Partitions, &c. The necessary Working Drawings to explain the construction of different parts of Buildings will be provided for the Students to copy.

Third Term.—Byzantine and Romanesque, with the Pointed Architecture of Italy and France. The introduction, development and perfection of the Architecture of the Middle Ages in Britain will be fully treated.

During this Term three Excursions will be arranged to visit the best examples of Mediæval Architecture in the neighbourhood for the purpose of Sketching and Measuring the work.

The Design and Construction of Stone Vaults—the Tracery of Windows and other important Wrought Stonework of Buildings—the Ornamental Treatment of Iron, Stone, Wood and Plaster Work, and other Materials for Architectural purposes.

Fee, £5 5s. for three Terms; £4 4s. for two Terms; £3 3s. for one Term.

GEOLOGY.

Professor, W. J. Sollas, M.A.

Monday, Wednesday and Friday, 4—5.

This course will be given during the first and second Terms.

The lectures will be illustrated by specimens and diagrams. A paper of questions to be worked out will be set weekly.

Syllabus.

1. The form, general structure and movements of the Earth.

2. The crust of the Earth: general distribution of land-masses (Geography), the structure and arrangement of rock-masses (Petrology) the minute structure of rocks (Lithology), the characters of lithological units (Mineralogy). Movements of the Earth's crust, Elevation and Depression; Volcanoes and Earthquakes. The internal state of the Earth. Theory of central heat.

3. The Ocean: its distribution, tides, waves and currents. Rivers.

4. The Atmosphere: its extent; winds, clouds and rain (Meteorology).

5. The action of the sea, rivers and atmospheric agents upon the land. Disintegration of rocks, transportal of detritus. Excavation of river valleys, waste of coast-lines. Deposition of sediment, growth of deltas and oceanic plains. Consolidation and metamorphosis. Origin of table-lands, mountain-chains, hills and valleys.

6. Historical sketch of the development of the British Islands, embracing a series of restorations of their general outlines, faunæ and floræ, as these existed in past times. The Archean rocks of Canada and their British equivalents. Cambrian system: theory of slaty cleavage; contemporaneous volcanic action. Silurian system: the district of Tortworth. Old Red Sandstone and Devonian system: an account of the great lake-deposits of Wales and Scotland. Carboniferous system: its relations to the underlying Devonian strata: the formation of coal and the duration of our coal supply. Permian system: the crust movements and denudation which preceded it. Theory of mineral veins. Trias system: origin of rock salt and gypsum; the East to West folding of the British Isles. Rhætic series: Fish remains of Aust cliff; contemporaneous deposits of the Continent. Jurassic system: Australian affinities of its forms of life, distribution of coral reefs. Neocomian system: the delta of the Weald; palæozoic axis of London and Harwich. Cretaceous system: origin of chalk, greensand, flints and coprolites. Eocene system: London and Hampshire basins, deposits of Bovey Tracy; volcanic action on the shores of Northwest Britain; tropical climate of the Northern temperate regions and amelioration of arctic conditions. Miocene: plant remains, discoveries of Professor Heer, subtropical climate of temperate regions.

Pliocene: subappenine beds of Italy, cold climate of England. Glacial deposits: period of confluent glaciers, of submergence, of valley glaciers. Prehistoric man: his habitations, implements and mode of life; contemporaneous mammalian fauna. A general sketch of the Evolution of the Earth.

Text-books.—*Text-book of Geology*, Geikie; Jukes' *Manual of Geology*; *Traité de Géologie*, Lapparent; *Elemente der Géologie*, Credner; *Syllabus of Lectures on Geology*, Sollas. References to works treating of special branches of the subject will be given during the lectures.

Practical Work.

Facilities will be afforded for the practical study of rocks and fossils.

Excursions.

Excursions to illustrate the subjects of the lectures and to gain an insight into the principles of geogological surveying will be made at intervals to places of interest in the neighbourhood.

Fee, £4 4s. for two Terms; £3 3s. for one Term.

GEOLOGICAL LABORATORY.

Professor, W. J. Sollas, M.A.

The Geological Laboratory is open daily from 10—4, except on Saturday, when it closes at 1 o'clock.

A course of practical instruction in the methods of geological research, and on the characters of the more important minerals and rocks, will be conducted under the supervision of the Professor.

Fee, for the Session, £8 8s.; for each Term, £3 3s.

LITHOLOGY.

Professor, W. J. Sollas, M.A.

Monday and Wednesday, 11—1.

This course will be given during the third Term only.

Syllabus.

1. The characters of the chief rock-forming minerals.

2. The structure and origin of the most important kinds of Rock, including Sand and Sandstone, Clay and Slate, Limestone, Granite, Syenite, Diorite, Basalt and Serpentine. The various causes of decay in rocks, and the means to be taken for their preservation. The selection of building stones.

3. A brief account will be added of the chief facts of Petrology. The structure and arrangement of rock-masses; lines of stratification, joints, cleavage, faults. The construction of Geological Maps.

Each class will commence with a lecture or demonstration, which will be followed by practical work in the laboratory In this way the powers of observation and reasoning will be cultivated together, and a real knowledge of facts and principles ensured.

Field Practice.

The class will occasionally take short journeys into the country in order to study practically the methods of geological surveying.

Fee, £3 3s. Fee for the classes on Geology and Lithology combined, £6 6s.

PALÆONTOLOGY.

Professor, W. J. Sollas, M.A.

Tuesday and Thursday, 10—11.

This course will be given during the first and second Terms.

Syllabus.

The various processes by which organic remains are preserved in stratified deposits. The doctrine of

"continuity," and the imperfection of the geological record. The application of palæontological data to geological problems. An account of the structure and affinities, classification and distribution of the more important kinds of fossil animals and plants.

The teaching will generally take the form of practical demonstrations.

Fee, £4 4s. for two Terms; £3 3s. for one Term.

BIOLOGY.

Professor, W. J. Sollas, M.A.

Monday, 11—1; Tuesday and Thursday, 2.30—5.

This course will be given in the first Term only.

Syllabus.

The morphology and physiology of typical forms of life.

Typical Plants.—*Protococcus* and *Saccharomyces* (yeast), *Penicillium* and *Mucor* (moulds), *Chara* or *Nitella*, a fern and flowering plant.

Typical Animals.—*Amœba*, *Vorticella*, *Hydra*, Earthworm, Leech, Mussel, Snail, Lobster or Crayfish, Cockroach, Frog.

A lecture will be given at the commencement of each class on one or more of the foregoing "types," specimens of which will then be given to the students for dissection and microscopical examination. The object of this course is to impart an accurate and practical knowledge of the nature of common living things. The instruction covers the subjects required for the Intermediate Examination in Science of the University of London.

Students beginning the study of *Zoology* are advised to commence it with this course.

Students in this class will be required to defray the expense of materials used.

Text-book.—*Elementary Instruction in Practical Biology* (Huxley and Martin).

Fee, £3 3s.

BIOLOGICAL LABORATORY.

Professor, W. J. Sollas, M.A.

The Biological Laboratory is open daily from 10—4, except on Saturday, when it closes at 1 o'clock.

A course of practical instruction in the methods of biological research, and on the structure of the leading animal types will be conducted under the supervision of the Professor.

A class will be formed to undertake the original investigation of some special subject or the complete study of some small group of animals.

Arrangements are made for obtaining such specimens as are not preserved in the pond, tanks, or cages of the Laboratory.

Students will find it convenient to provide themselves with a microscope of their own; good working instruments can now be obtained at comparatively small cost; but it would be advisable for students to consult the Professor before purchasing, as the value of a microscope depends greatly upon the maker. A fee of 10/- a Term will be charged for the use of a College microscope. Each student is expected to be provided with a set of the necessary dissecting apparatus, which can be obtained at Messrs. Ferris and Co.'s for 8/6.

Fee, for the Session, £8 8s; for each Term, £3 3s.

ZOOLOGY.—I.

Professor, W. J. SOLLAS, M.A.

Tuesday and Thursday, 2.30—5.

SYLLABUS.

A practical and theoretical study of the following typical animal forms: *Amæba*, *Paramecium*, *Hydra*, Earthworm, Leech, Mussel, Snail, Crayfish, Cockroach, Frog and Rabbit.

This course covers the subjects required for the Preliminary Scientific (M.B.) Examination of the University of London.

Students in this class will be required to defray the expense of materials used.

Text-books.—*Elementary Instruction in Practical Biology* (Huxley and Martin); *A Course of Practical Physiology* (Foster and Langley); *Die Anatomie des Kaninchens* (Krause).

Fee, £5 5s. for three Terms; £4 4s. for two consecutive Terms; £3 3s. for the first or second Term singly; £2 2s. for the third Term.

COMPARATIVE ANATOMY.

Professor, W. J. SOLLAS, M.A.

Tuesday and Thursday, 2.30—5; Saturday, 11—12.

This course will be given during the first Term only.

On Tuesday and Thursday the instruction will be the same as that given in Zoology; on Saturday the Morphology of the Vertebrata, with special reference to their Osteology will be studied.

This course is intended to meet the requirements of students preparing for the Fellowship Examination of the Royal College of Surgeons.

Text-books.—*Elementary Instruction in Practical Biology* (Huxley and Martin); *The Anatomy of Vertebrate Animals* (Huxley).

Fee, £4 4s.

ZOOLOGY.—II. POND LIFE.

Professor, W. J. SOLLAS, M.A.

Tuesday and Thursday, 10—12.

The object of the course is to impart a scientific and practical knowledge of the various kinds of fresh water animals found in the neighbourhood of Bristol. The Protozoa, Spongiæ, Hydrozoa, Polyzoa, Mollusca, Platyhelminthes, Annelida, Rotifera, and Crustacea will be especially studied. The course will include instruction in the use of the microscope, the preparation and mounting of microscopic objects, and in the modern methods of Zoological investigation. Excursions for the observation and collection of animals will be made occasionally to the ponds of the neighbourhood.

Students who are preparing for the examinations in Zoology of the University of London with a view to taking degrees in Natural Science are recommended to consult with the Professor.

Fee, £5 5s. for three Terms; £4 4s. for two consecutive Terms; £3 3s. for the first or second Term singly; £2 2s. for the third Term.

BOTANY.

Lecturer, ADOLPH LEIPNER.

Monday, 2—3; Thursday, 2—4.

This course will be given during the second and third Terms, so as to include the most active season of plant-life. It covers the entire range of Botanical studies required for the Preliminary Scientific (M.B.) Examination, and the Intermediate Examination in Science of the University of London.

Facilities will also be given to any student (Elementary or Advanced) for practical work in any special department of Botany.

The Botanical Garden, which has been recently formed, attached to the College, contains upwards of 1,000 specimens illustrating the different orders, and being at all times accessible to students gives every opportunity for illustration and study.

Text-books.—*Text-book of Botany*, by Prantl and Vines; Sach's *Text-book of Botany*. For fieldwork—Hooker's *Students' Flora of the British Islands*, or Babington's *Manual of English Botany*.

Fee, £4 4s. for two Terms; £3 3s. for the second Term only; £2 2s. for the third Term only.

POLITICAL ECONOMY.

Lecturer, R. Mary Fry.

Wednesday and Friday, 12—1.

Syllabus.

The scope of Political Economy. National wealth and expenditure. The organisation of industry. Growth of population and capital.

The theory of value. Rent, wages and prices. The theory of money. Banking. Commercial crises. Foreign trade.

Economic progress and its influence on the distribution of wealth and on national character. Monopolies. Trades Unions. Co-operation.

The economic functions of government. Taxation. Factory Acts. Education Acts. Poor Laws. Bearing of economic principles on questions of public and private duty.

Text-books.—Marshall's *Economics of Industry;* Mill's *Political Economy*. The following also may be read:—Cairnes' *Logical Method of Political Economy;* Walker's *Wages Question;* Jevons' *On Money*.

Fee, £4 4s. for three Terms; £3 3s. for two consecutive Terms; £2 2s. for any single Term.

LOGIC.

Professor, R. FANSHAWE, M.A.

Tuesday and Thursday, 10.30—11.30.

FIRST TERM.—ELEMENTARY LOGIC.

Text-books.—Jevons' *Elementary Lessons in Logic;* Fowler's *Inductive Logic.*

SECOND TERM.—EXAMINATION OF MILL'S LOGIC.

This course will be given during the first and second Terms.

Fee, £4 4s. for two Terms; £3 3s. for one Term.

*MODERN HISTORY.

Professor, J. ROWLEY, M.A.

The Professor of Modern History will lecture twice a week during each of the three Terms of the Session. He will also hold two classes in each week. These classes are intended to be supplementary to the lectures; it is sought through them to give students an opportunity of acquainting themselves with particular passages of history as these are described in the works of the best accessible writers on the subject. Examinations may be held from time to time during the Term, in addition to those specified in the Calendar.

The subject for the first and second Terms will be the History of England from the end of the American War of Independence to the passing of the first Reform Bill. The subject for the third Term will be the career of Napoleon Bonaparte, and his ascendancy in Europe.

The lectures will be given on Tuesdays and Thursdays from 11 to 12. The classes will be held on Mondays and Wednesdays from 11 to 12.

Text-book.—Mr. Franck Bright's *History of England.*

Fee, £5 5s. for three Terms; £4 4s. for two consecutive Terms; £3 3s. for either the first or second Term; £2 2s. for third Term.

*ENGLISH LITERATURE.

Professor, J. ROWLEY, M.A.

The Professor of English Literature will lecture twice a week during the first and second Terms, and once a week during the third Term of the Session. He will also hold two classes in each week during all three Terms. In these classes he will read with those of the students who desire to do so the more remarkable literary works produced during the period which forms the subject of his lectures. Examinations may be held occasionally in Term in addition to those specified in the Calendar.

The subject for the Session will be English Literature from the death of Shakespeare to the death of Milton.

The lectures will be given on Tuesdays and Thursdays from 12 to 1, and during the third Term on Tuesdays only; the classes will be held on Mondays and Wednesdays from 12 to 1.

Text-book.—Mr. Thomas Arnold's *Manual of English Literature.*

Fee, £5 5s. for three Terms; £4 4s. for two consecutive Terms; £3 3s. for either the first or second Term; £1 11s. 6d. for third Term.

* NOTE.—Special instruction, beginning on the first Tuesday in November, in the subjects of Group A or of Group H of the Cambridge Higher Local Examination, or in those of the English Honour Section of the Oxford Examination for Women, will be offered to students of these classes, and to such other students of the College as may satisfy the requirements of the Professor. The fee for this instruction is £4 4s.

†GREEK.

Professor, R. FANSHAWE, M.A.

Lecturer, EDWARD BUCK, M.A.

There will be an Elementary and an Advanced Class in Greek, of which the first will meet on

† See Note, p. 66.

Tuesdays, Thursdays and Saturdays at 12, and the second on Mondays, Wednesdays and Fridays at 4.

Fee, £5 5s. for three Terms; £4 4s. for two consecutive Terms; £3 3s. for the first or second Term singly; £2 2s. for the third Term.

*LATIN.

Professor, R. FANSHAWE, M.A.

Lecturer, EDWARD BUCK, M.A.

There will be an Elementary and an Advanced Class in Latin, of which the first will meet on Tuesdays, Thursdays and Saturdays at 11, and the second on Mondays, Wednesdays and Fridays at 3.

Fee, £5 5s. for three Terms; £4 4s. for two consecutive Terms; £3 3s. for the first or second Term singly; £2 2s. for the third Term.

* NOTE.—The authors read in Greek and Latin will be chosen with reference to the wants of students of the College who present themselves. Special provision will be made for candidates for the London University Examinations, the Oxford Examination for Women, and the Cambridge Higher Local Examination.

ANCIENT HISTORY AND LITERATURE.

Professor, R. FANSHAWE, M.A.

Tuesday and Thursday, 12—1.

SUBJECT.—GREEK SCULPTURE.

SYLLABUS.

The origin and development of Greek sculpture. Its relation to other arts. Its connection with Greek life, history, religion and literature. Its practice and principles. An account of the more important discoveries of ancient works of art. Ancient theories of art. Modern theories, especially those of

Winckelmann and Lessing. Lectures on particular statues and remains—the Parthenon, the Venus of Milo, the Laokoon, the Apollo Belvedere. The general character and influence of Greek art.

This course will be given during the first and second Terms.

Fee, £4 4s. for two Terms; £3 3s. for one Term.

HEBREW.

Lecturer, BERNHARD HEYMANN.

A class for beginners on Grammar and Translation will be held on Wednesdays and Fridays, from 2.30 to 3.30.

Instruction will be given to advanced students on Wednesdays and Fridays, from 3.30 to 4.30. The Book of Genesis will be read, and occasional lectures will be given on Grammar and the earlier commentators.

Text-books may be obtained at the Registrar's office.

Fee, for either course, £3 3s. for three Terms; £1 1s. for one Term.

FRENCH LANGUAGE AND LITERATURE.

Lecturer, EUGÈNE PELLISSIER, M.A., LL.B., B.Sc.

Instruction will be given in the French Language and Literature every Tuesday, Thursday and Friday. Advanced Class from 2.30 to 3.30. Elementary Class from 3.30 to 4.30.

In the Advanced Class lectures on French Literature from A.D. 1650 to 1700 will be delivered in French every Friday.

Text-books. — Advanced Class: Brachet's *French Grammar* (Hachette's English edition); *The graduated course of translation, Part II., Senior Course*, Cassal and Karcher; La Bruyère, *Les Caractères* (Hachette); Racine, *Britannicus*.

Elementary Class: Brachet's *Elementary French Grammar* (Hachette's English edition); *The graduated course of translation, Part I., Junior Course*, Cassal and Karcher; Mad. de Witt, *Derrière les Haies*.

Those who wish to enter for the Cambridge Higher Local Examination will be directed in their studies of the books recommended for it, especially Brachet, *Historical French Grammar*, and Geruzez, *Histoire de la Littérature Française*.

Fee for each course, £5 5s. for three Terms; £4 4s. for two consecutive Terms; £3 3s. for the first or second Term singly; £2 2s. for the third Term.

GERMAN LANGUAGE AND LITERATURE.

Lecturer, ADOLPH LEIPNER.

Instruction will be given in the German Language and Literature every Monday, Wednesday and Friday. Elementary Class from 3 to 4. Advanced Class from 4 to 5.

In the Advanced Class occasional lectures on some Authors or a period of German Literature will be delivered in German.

Text-books.—For the Advanced Class: Eve's *German Grammar;* Schiller's *Historische Skizzen*, and Goethe's *Iphigenia auf Tauris* (Clarendon Press series). For the Elementary Class: *German Studies*, by H. Plate, Part I. (Dresden, Louis Ehlermann); Schiller's *Wilhelm Tell* (Clarendon Press series).

Those who wish to enter for the Cambridge Higher Local Examination will be directed in their studies of the books recommended, especially Eve, *Short German Syntax;* Gostwick and Harrison, *Outline of German Literature;* Vilmar, *Geschichte der deutschen National-litteratur;* Gelbe, *Deutsche Sprachlehre;* Roquette, *Geschichte der Deutschen Dichtung*.

Fee, £5 5s. for three Terms; £4 4s. for two consecutive Terms; £3 3s. for the first or second Term singly; £2 2s. for the third Term.

GENERAL TIME TABLE OF DAY CLASSES.

	Monday	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
CHEMISTRY—Inorganic .. .. .. (*a*)	9	—	9	—	9	9
" Organic .. .. .. (*f*)	—	9	—	9	—	9
" Advanced Course .. (*a*)	—	—	—	—	—	*9
" Laboratory Instruction	10 to 5	10 to 5	10 to 5	10 to 5	10 to 5	10 to 1
" " Special Course (*a*)	—	4 to 6	—	4 to 6	—	—
MATHEMATICS—Elementary, Div. I.	*11	—	*11	—	*11	—
" " Div. II.	*12	—	*12	—	*12	—
" " Div. III.	—	*10	—	*10	—	*10
" Advanced	*10	—	*10	—	*10	—
EXPERIMENTAL PHYSICS—						
Elementary	—	†12	—	12	—	—
Intermediate	11	—	*11	—	11	—
Advanced .. .. (*a*)	—	—	†2	—	†2	—
Technical .. .. (*e*)	—	2	—	2	—	—
Laboratory Instruction ..	10 to 5	10 to 5	10 to 5	10 to 5	10 to 5	—
ENGINEERING—1st year	10	—	10	—	10	—
" 2nd year	—	11	—	11	—	11
" 3rd year .. .. (*a*)	12	—	12	—	12	—
GEOMETRICAL DRAWING .. .. (*a*)	—	*2 to 4	—	*2 to 4	—	—
ENGINEERING DRAWING AND BUILDING CONSTRUCTION (*a*)	*2 to 4	—	*2 to 4	—	*2 to 4	—
SURVEYING—Elementary .. .. (*e*)	—	—	2 to 5	—	2 to 4	—
" Advanced .. .. (*e*)	—	2 to 4	—	2 to 4	—	—
ARCHITECTURE	—	9	—	9	—	—
GEOLOGY .. .. (*a*)	4	—	4	—	4	—
" Laboratory Instruction ..	10 to 4	10 to 4	10 to 4	10 to 4	10 to 4	10 to 1
LITHOLOGY .. .. (*e*)	†11 to 1	—	†11 to 1	—	—	—
PALÆONTOLOGY .. .. (*a*)	—	†10	—	†10	—	—
BIOLOGY .. .. (*b*)	†11 to 1	†2 30 to 5	—	†2 30 to 5	—	—
" Laboratory Instruction ..	10 to 4	10 to 4	10 to 4	10 to 4	10 to 4	10 to 1
ZOOLOGY, I.	—	†2 30 to 5	—	†2 30 to 5	—	—
COMPARATIVE ANATOMY .. .. (*b*)	—	†2 30 to 5	—	†2 30 to 5	—	11
ZOOLOGY, II.—Pond Life	—	†10 to 12	—	†10 to 12	—	—
BOTANY .. .. (*c*)	†2	—	—	†2 to 4	—	—
POLITICAL ECONOMY	—	—	12	—	12	—
LOGIC .. .. (*a*)	—	10.30	—	10.30	—	—
MODERN HISTORY	*11	11	*11	11	—	—
ENGLISH LITERATURE .. .. .. (*g*)	*12	12	*12	12	—	—
GREEK—Elementary	—	*12	—	*12	—	*12
Advanced	*4	—	*4	—	*4	—
LATIN—Elementary	—	*11	—	*11	—	*11
Advanced	*3	—	*3	—	*3	—
ANCIENT HISTORY AND LITERATURE (*a*)	—	12	—	12	—	—
HEBREW—Elementary	—	—	*2.30	—	*2.30	—
Advanced	—	—	3.30	—	†3.30	—
FRENCH—Elementary	—	*3.30	—	*3.30	*3.30	—
Advanced	—	*2 30	—	*2.30	2.30	—
GERMAN—Elementary	*3	—	*3	—	*3	—
Advanced	*4	—	*4	—	*4	—

The instruction in the hours which are marked with * will take the form of class teaching.

The instruction in the hours which are marked with † will in some part take the form of class teaching.

(*a*) During the first and second Terms ; (*b*) during the first Term only ; (*c*) during the second and third Terms only ; (*d*) during the second Term only ; (*e*) during the third Term only ; (*f*) on Tuesdays and Thursdays during the second Term ; on Tuesdays, Thursdays and Saturdays during the third Term ; (*g*) only one lecture and classes in the third Term.

SESSION 1882—83.

LIST OF SCHOLARS.

Chemical Scholarship :—
Franklen P. Evans.

First General Scholarship :—
Henry A. Reed.

Third General Scholarship :—
Flora M. Waring.

Catherine Winkworth Scholarships :—
Gertrude E. Metcalfe.
Edith M. Clarke.

The Second General Scholarship was not awarded.

EXAMINATIONS OF DAY CLASSES.

LIST OF HONOURS.

INORGANIC CHEMISTRY.

Class I.	Class II.
First Term :—	
Norman Leonard,	Katharine I. Williams,
Andy B. Hargrave,	James W. Cruikshank,
George E. J. McMurtrie,	Robert G. P. Lansdown.
Herbert J. Thomas.	
Second Term :—	
Norman Leonard,	Herbert J. Thomas,
Katharine I. Williams,	George E. J. McMurtrie,
Andy B. Hargrave.	Trevor H. Evans.

ORGANIC CHEMISTRY.

Second Term :—

Thomas Hunter,
Arthur H. Joseph,
Frank J. Wethered.

MATHEMATICS.

Elementary.

Class I.	Class II.
First Term—Division I.:—	
Frederick G. Shaw, Caroline Sturge, Gertrude E. Metcalfe.	David M. Davies, Henry A. Reed, Charles C. Hardy, Herbert I. Jacques, Evan Morgan.
Division II.:—	
Bessie Steadman, Mary Williams.	Ellen M. Leonard, George E. J. McMurtrie.
Division III.:—	
	James H. Shindler.
Second Term—Division I.:—	
Henry A. Reed, Frederick G. Shaw.	Herbert I. Jacques.
Division II.:—	
Mary Williams, Edmund R. Dymond, Ellen M. Leonard.	George E. J. McMurtrie, Evan Morgan, Henry W. Williams, Bessie Steadman, Charles C. Hardy, Edwin Baggs.
Division III.:—	
	John D. Hyde.

Advanced.

First Term:—	
	Amy K. Cooper, Arthur W. Metcalfe.
Second Term:—	
Amy K. Cooper.	Arthur W. Metcalfe.

EXPERIMENTAL PHYSICS.

Elementary.

First Term:—	
Anna Fox, Franklen P. Evans, George E. J. McMurtrie, Edmund R. Dymond, Herbert J. Thomas.	Edwin Baggs, Andy B. Hargrave.

Class I.	Class II.
Second Term. :—	
Anna Fox.	Edmund R. Dymond, Herbert J. Thomas, Hector D. Munro.

ADVANCED.

Second Term :—	
	Henry W. Williams.

NATURAL PHILOSOPHY.

First Term :—	
Gertrude E. Metcalfe.	Mary M. Davies.
Second Term :—	
	Mary M. Davies.

ENGINEERING.

First Year Course.

First Term :—	
Edmund R. Dymond, James W. Cruikshank.	Charles C. Hardy, Herbert I. Jacques.
Second Term :—	
Edmund R. Dymond, Charles C. Hardy, Hector D. Munro.	Herbert I. Jacques, Henry L. T. Foster.

Second Year Course.

First Term :—	
George E. J. McMurtrie, Henry W. Williams, Henry A. Reed, Edwin Baggs, George F. Fry.	William A. Leipner.
Second Term :—	
Edwin Baggs, Henry A. Reed.	George E. J. McMurtrie, George F. Fry.

Third Year Course.

First Term :—	
	Arthur W. Metcalfe, Maurice Taylor.
Second Term :—	
Arthur W. Metcalfe, Henry W. Williams.	Maurice Taylor.

ENGINEERING DESIGN AND DRAWING.

First Year Course.

Class I.	Class II.
Second Term :—	
Edmund R. Dymond.	Herbert I. Jacques, Henry L. T. Foster, George S. Woodward, Charles C. Hardy, John D. Hyde.

Second Year Course.

First Term :—

Edwin Baggs.

Henry W. Williams,
George E. J. McMurtrie.

Second Term :—

Edwin Baggs,
Henry W. Williams.

Third Year Course.

First Term :—

Arthur W. Metcalfe.

Second Term :—

Arthur W. Metcalfe.

GEOMETRICAL DRAWING.

First Term :—

Edwin Baggs.

Second Term :—

Edwin Baggs.

GEOLOGY.

First Term :—

Cyril F. Bengough,
Henrietta Whitwell.

Second Term :—

Henrietta Whitwell.

ZOOLOGY, I.

First Term :—

Herbert J. Thomas,
Robert G. P. Lansdown.

Second Term :—

Trevor H. Evans.

Herbert J. Thomas.

ZOOLOGY, II.—POND LIFE.

Class I.	Class II.
First Term:—	
Franklen P. Evans, Agnes Martyn, Margaret Ogilvie.	
Second Term:—	
Margaret Ogilvie, Franklen P. Evans.	

BOTANY.

Elementary.

Second Term:—

Herbert J. Thomas.

Advanced.

Second Term:—

George H. Barker.

POLITICAL ECONOMY.

Elementary.

First Term:—	
Constance E. Budgett.	Elizabeth W. Fry, Alice M. Budgett.
Second Term:—	
Constance E. Budgett, Elizabeth W. Fry.	Mary Williams, Katherine R. Mansfield, Alice M. Budgett.

Advanced.

Second Term:—

Gertrude Whibley,
Edith C. Wilson.

MORAL PHILOSOPHY.

Second Term:—

Edith E. Cooper,
Katharine H. Bradley. }

MODERN HISTORY.

First Term:—	
Mary I. Ogilvie, Caroline Sturge, Emily M. Garaway, Ethel C. Moore, Flora M. Waring, Annie Wise, David M. Davies.	Bertha Worsley.

Class I.		Class II.
	Second Term :—	
Mary I. Ogilvie, Emily M. Garaway, Ethel C. Moore, Annie Wise, Clara L. Hiatt.		Edith Bridger, Katie Gooch.

ENGLISH LITERATURE.

	First Term :—	
Henrietta Whitwell, Edna H. Price, Mary A. Hartnell, Emily M. Garaway, Celia W. Price.		Frances L. Evans, E. Beatrice Marshall, Beatrice E. Bengough, Ethel I. Leonard.
	Second Term :—	
Emily M. Garaway, Edna H. Price, Mary A. Hartnell, Henrietta Whitwell, Frances L. Evans.		E. Beatrice Marshall, Beatrice E. Bengough, Ethel I. Leonard, Walter H. Jefferis.

GREEK.

Advanced.

Second Term :—

David M. Davies.

LATIN.

Elementary.

First Term :—

Anna Fox

Second Term :—

James H. Shindler.

Advanced.

	First Term :—	
Edith M. Clarke.		Evan Morgan, Gertrude E. Metcalfe.
	Second Term :—	
Anna Fox, Edith M. Clarke.		David M. Davies.

FRENCH.

Elementary.

Class I.		Class II.
	First Term:—	
Nellie M. Morgan, Samuel W. Morgan.		Henry Bright, James H. Shindler, Cyril F. Bengough.
	Second Term:—	
Samuel W. Morgan.		James H. Shindler.

Advanced.

	First Term:—	
Ethel C. Moore.		Flora M. Waring, Mabel P. Nunn.
	Second Term:—	
Ethel C. Moore, Florence O'Brien.		Ellen S. Lane.

GERMAN.

Elementary.

	First Term:—	
Anna Fox.		Samuel W. Morgan, Mary M. Davies, Constance O'Brien.
	Second Term:—	
		Mary M. Davies, Ellen S. Lane, Constance O'Brien, Charles E. Pratt, Samuel W. Morgan.

Advanced.

	First Term:—	
		Ethel C. Moore, Flora M. Waring.
	Second Term:—	
		Flora M. Waring, Ethel C. Moore.

The list of Honours obtained in the Examinations at the end of the third Term will be found in the Appendix.

Evening Lectures.

GENERAL REGULATIONS.

(1.) Each student on admission must sign an undertaking to observe all the regulations affecting students made by the Council of the College for the time being.

(2.) The Registrar and Secretary will attend at his office, for the purpose of admitting students, from 6.45 to 8.15 p.m., from October 8th to October 19th, 1883, January 17th to January 25th, and from April 28th to May 2nd, 1884, except on Saturdays.

(3.) The tickets of admission issued by the Registrar and Secretary must be presented to the Professors and Lecturers for insertion of the student's name in the class lists.

(4.) A record will be kept of the attendance of students. A report of the attendance of any student will be periodically sent to his parents or guardians if they require it.

(5.) Students will be required to pay an entrance fee of 1/- per class, or a composition fee of 3/- for three or more classes during one Session, to be paid in addition to the ordinary course fees.

(6.) Disorderly conduct on the part of any student will be reported to the Principal, who will adopt such action thereon as he may deem necessary.

(7.) Every student is required to provide himself with a College Calendar.

The Council reserve to themselves the power of suspending any class, if there are not a sufficient number of entries.

FEES.

The fees are as a rule:—For courses in which two hours of instruction are given in the week, 15/- for three Terms; 10/6 for two Terms; 7/- for one Term.

Any exceptions to this rule will be found in the accounts given further on of the subjects of the several courses.

Evening Lectures.

SUBJECTS OF INSTRUCTION.

CHEMISTRY.

Lecturer, SYDNEY YOUNG, D.Sc.

Wednesday and Friday, 8—9.

This course consists of two lectures a week during the first and second Terms. The subject includes the general principles of Chemistry and Chemical Physics and the Chemistry of the non-metallic Elements. A few lectures at the end of the course will be devoted to the consideration of the Chemistry of the Metals. Special attention will be paid throughout to those products which have a practical application in the arts and manufactures. The lectures will be illustrated with experiments and diagrams. Examinations will be held from time to time during the course.

SYLLABUS.

PRINCIPLES OF CHEMISTRY AND CHEMICAL PHYSICS.—Various kinds of matter. Mixtures, compounds, and elements. Separation of mixtures. Solution, crystallization distillation, dialysis, diffusion. Atomic theory. Molecular theory of gases. Laws of Boyle and Gay-Lussac. Avogadro's hypothesis. Analysis and synthesis of compounds. Laws of combination. Quantivalence. Heat of combination. Methods of determining atomic weight.

THE NON-METALLIC ELEMENTS. — Hydrogen. Chlorine, Bromine, Iodine and Fluorine. Com-

pounds with Hydrogen. Oxygen, Sulphur, Selenium and Tellurium. Combustion and Respiration. Compounds with Hydrogen. Water. Compounds of Chlorine group with Oxygen, Sulphur, &c. Acids, Bases and Salts. Bleaching. Oxides and Oxy-acids of Sulphur, Selenium and Tellurium. Sulphuric acid manufacture. Nitrogen, Phosphorus, Arsenic, Antimony. Compounds with Hydrogen. Ammonia. Compounds with Chlorine and Oxygen groups. Nitric Acid. Lucifer Matches. Manures. Detection of Arsenic in cases of poisoning. Arsenical Dyes. Boron and its compound. Carbon and Silicon. Compounds with other elements. Fire-damp. After-damp. Ventilation. Illumination. Coal gas. Glass and Earthenware. Mortar and Cements. Building materials.

The Metals.—General properties, physical and chemical; Classification; the special properties and methods of preparation of the more important metals, such as Iron and Copper.

This course covers the subjects prescribed for Matriculation in the University of London.

Text-books.—Roscoe's *Smaller Chemistry;* or Thorpe's *Inorganic Chemistry;* Thorpe's *Chemical Problems.*

Fee, 10/6 for two Terms; 7/- for one Term.

TECHNICAL CHEMISTRY.

Special Course.

(With the Co-operation of the Worshipful Company of Clothworkers.)

Professor, W. Ramsay, Ph.D.

First and Second Terms.—A course of lectures will be delivered on Tuesday evenings at 8 o'clock, on the scouring, bleaching and dyeing of Wool, Silk, Cotton, Linen and Jute. This course is

designed to afford information to those engaged in the manufacture and sale of articles made of the above materials. It will imply no previous knowledge of chemistry; but those who purpose to attend it are recommended to enter the Evening Chemistry Classes during the first Term.

Syllabus.

Lecture I.—Preliminary. Nature of chemical compounds. Nature of re-actions. Oxidising, reducing. Sketch of elements of which fibres are formed.

Lecture II.—Sources of Wool, Silk, Linen, Cotton and Jute. Varieties. Difference between animal and vegetable fibres. Structure of fibres. Chemical relations of fibres.

Lecture III.—Chemical relations of wool and silk. Behaviour with re-agents. Means of distinguishing them from each other. Chemical relations of linen, cotton and jute. Behaviour with re-agents.

Lecture IV.—Scouring wool and silk. Wool pickling.

Lecture V.—Chemistry of bleaching wool and silk. Bleaching cotton, linen and jute. Continuous process of bleaching. Electrical bleaching. Antichlores.

Lecture VI.—Thickeners, their chemical and mechanical action. Vegetable and animal thickeners. Mineral thickeners.

Lecture VII.—Classification of dyes. Action of mordants. Nature and preparation of mordants.

Lecture VIII.—Chemistry of the indigo-group. Artificial indigo. Commercial valuation of indigo.

Lecture IX.—Preparation of artificial indigo. Methods of application.

Lecture X.—Madder. Root. Artificial alizarine. Garancine. Anthrapurpurine. Behaviour with mordants.

Lecture XI.—Printing with turkey-red.

Lecture XII.—Dyewoods. Principles contained in them. Extracts. Behaviour with mordants.

Lecture XIII.—Cochineal, Lac, Carmine, Lakes, Lichen colours. Litmus, safflower, brown and black colouring matters. Astringents.

Lecture XIV.—Aniline colours. Methods of production.

Lecture XV.—Reds and blues.

Lecture XVI.—Black. Use of vanadium. Electrolytic black.

Lecture XVII.—Azo-colours. Naphthalene-colours. Resorcene-colours.

Lecture XVIII.—Discharging colours.

Lecture XIX.—Process of milling woollen goods. Soaping. Steaming. Action on colours.

Lecture XX.—Detection of dyes on woven goods. Fugitive and permanent dyes. Conclusion.

Fee, 10/6 for two Terms; 7/- for one Term.

EXCURSIONS.

In order that students may have an opportunity of acquiring some knowledge of applied Chemistry, excursions to some of the mines and manufactories of the neighbourhood will occasionally be made. They will be conducted by the Professor or Lecturer. Past or present students of the College desirous of taking part in these excursions are invited to apply to the Professor of Chemistry.

MATHEMATICS.

Lecturer, EDWARD BUCK, M.A.

Monday and Thursday, 7—9.

Elementary Mathematics.—Arithmetic, Euclid, Algebra and Trigonometry.

Advanced Mathematics.—Conic Sections, Spherical Trigonometry and Differential Calculus.

Students in these classes may attend either on Mondays or Thursdays.

Fee for the class in Elementary Mathematics, 15/- for three Terms; 10/6 for two Terms; 7/- for one Term; for the class in Advanced Mathematics, 30/- for three Terms; 25/- for two consecutive Terms; 20/- for one Term.

SOUND, LIGHT AND HEAT.

Lecturer, C. C. STARLING.

During the first and second Terms a course of twenty lectures will be delivered on Sound, Light and Heat, on Tuesdays, from 7 to 8 o'clock.

An Exercise Class will be held on Tuesday evenings from 8 to 9 o'clock.

Students attending the Exercise Classes are expected to take home problems to work.

SYLLABUS.

I.—HEAT.

Thermometry.—Measurement of Temperatures, of Expansion by Heat. Thermometers and Pyrometers. The Air Thermometers.

Calorimetry.—Calorimeters. Specific Heat. Measurement of Quantities of Heat. Latent or Potential Heat.

The elements of Thermodynamics. Convection, Conduction, Radiation and Absorption of Heat.

II.—Light.

The simple Laws of Optics. Velocity and Intensity of Light.

Geometrical Optics.—Mirrors, Lenses, Telescopes and Microscopes. Laws of Reflexion and Refraction of Light.

Physical Optics.—Dispersion of Light. The Spectroscope. Phosphorescence and Fluorescence. The Wave Theory of Light. Phenomena of Interference and Diffraction. Double Refraction and Polarisation of Light.

Physiological Optics.—The Eye and its Optical Adjustments. Optical Illusions.

III.—Sound.

Sources and Nature of Sound. Velocity of Sound. Singing and Sensitive Flames. Vibration of Rods, Strings, &c. Nature of Speech. The Phonograph. Physical Theory of Music.

Text-book.—Deschanel's *Natural Philosophy*, Vols. II. and IV. only (Blackie and Son).

Fee, 10/6 for two Terms; 7/- for one Term.

ELECTRICITY AND MAGNETISM.

Professor, Silvanus P. Thompson, D.Sc., B.A.

Demonstrator, C. C. Starling.

During the first and second Terms a course of twenty lectures will be delivered on Electricity and Magnetism, on Thursday evenings, from 7 to 8 o'clock. Exercise classes for working problems on the lectures will be held on Thursday evenings from 8 to 9 o'clock.

SYLLABUS.

Frictional Electricity.—Electrical Machines. Electroscopes. Induction. Leyden Jars and other condensers. Electrometers.

Magnetism.—Magnets, Natural and Artificial. Laws of Magnetic Force. The Compass and the Dipping Needle.

Current Electricity.—The Voltaic Cell. Batteries. Laws of Electromotive Force and of Resistance. Chemical Actions of the Current. Magnetic Actions of the Current. Electromagnets. Heating effects of the Current. Induction Currents.

Telegraphs and Telephones.—Principles of Construction and use of Telegraphic and Telephonic Instruments.

Electric Lighting.—Construction of Dynamo-electric Machines for Generating Electric Currents. Electric Lamps. The Voltaic Arc. Incandescent Lights.

Distribution and Storage of Electric Energy.—Systems of Distribution. Accumulators or Storage Batteries. Electric Motors or Engines. Electric Railways.

Text-book.—S. P. Thompson's *Electricity and Magnetism* (Macmillan and Co.)

Fee, 10/6 for two Terms; 7/- for one Term.

ELECTRICAL LABORATORY WORK.

Professor, SILVANUS P. THOMPSON, D.Sc., B.A.

Demonstrator, C. C. STARLING.

Systematic instruction in the Electric Laboratory will be given on Wednesday evenings from 7 to 9 p.m., by the Professor and his Demonstrator during the first and second Terms.

There will be two courses. An elementary one for junior students, and an advanced course for those already accustomed to electrical experimenting.

Elementary Laboratory Course.—Construction of simple apparatus. Electroscopes, Leyden Jars, Induction Apparatus, &c. Mode of measuring Quantity and Density of Charge, Insulation and Inductive Capacity. Use of Electric Machines. Management of Voltaic Batteries. Construction and use of Galvanometers. Experiments with Batteries, Induction Coils, Telegraphic and Telephonic Apparatus.

Students attending this course will be taught how to make various pieces of apparatus for themselves, and they will be expected to furnish the materials at their own expense, which will not exceed a few shillings; such apparatus remaining as their own property.

Advanced Laboratory Course.—Measurement of Resistance, Electromotive Force, &c. Use of Resistance Coils, Wheatstone's Bridge, Galvanometer and Electro-dynamometer. Use of Condensers. Construction and use of Dynamo-electric Machines. Management of Electric Arc Lights and Incandescent Lamps. Measurement of Currents employed in Electric Lighting. Tests of Efficiency of Machinery and Lamps.

Fee, for two Terms, £1 11s. 6d.; for one Term, £1 1s.

APPLIED MECHANICS AND STEAM.

Professor, H. S. Hele Shaw.

Friday, Lecture, 7—8; Class, 8—9.

These lectures will be delivered during the first and second Terms, and will cover the ground of the examinations of the Science and Art Department in the corresponding subjects.

(1) Nature and scope of Applied Mechanics. Definition of a Machine. Elements of Pure Mechanism.

(2) The Principle of Work and its Application to Simple Machines.

(3) The Experimental Study of the Laws of Friction, and its effect on Simple Machines. Contrivances for Utilizing and also those for Lessening Friction.

(4) The Laws of Force and Motion: Theory of the Fly Wheel, Fly Press, Fly Presses, Pile Driver, Ballistic Pendulum, &c.

(5) Use of Graphic Methods. Stress and Strain. The Form of Beams, Girders, Roofs and Bridges.

(6) Properties of Materials used in Construction —Wood, Iron, Steel, and other Metals and Stone.

(7) Sources of Energy in Nature.

(8) Water Power: Hydraulic Presses and Engines, Pumps.

(9) Wind Power, Windmills. Ventilating Pans. Cold Air Machines.

(10) Steam, Hot Air and Gas Engines.

A paper of questions on the subject of the lecture will be given in the class every week, to be worked out with the help of the Professor.

Fee, for two Terms, 10/6; for one Term, 7/-

GEOMETRICAL DRAWING.

Professor, H. S. Hele Shaw.

Wednesday, 7—8.

A course of twenty lessons in Practical Plane and Solid Geometry will be given during the first and Second Terms.

Plane Geometry.—The Construction of Scales. The Construction of Simple Figures. The Combination of Figures. The Transformation of Figures and Areas.

Solid Geometry.—Projections of Points and Lines. Traces of Lines and Surfaces. Projection of Simple Solid Forms. Sections and Penetration of Simple Solids. Developments of Surfaces of Simple Solids, and Drawing of Patterns and Templates for Boilers, &c.

Fee, for the course, together with that on Machine Design and Drawing, 10/6 for two Terms; 7/- for one Term.

MACHINE DESIGN AND DRAWING.

Professor, H. S. HELE SHAW.

Wednesday, 8—9.

A course of twenty lessons in Machine Drawing will be given during the first and second Terms.

The course of instruction will deal with the strength and form of Bolts and Nuts, Cotters, Shaftings, Couplings, Cranks, Eccentrics, Pistons, Pedestals, Plumber Blocks and Bearings, Toothed and Belt Gearing, Valves of various kinds, Pipes, Pipe Joints, Glands, Air and Force Pumps, and the preparation of Tracings and Working and Finished Drawings of Engines generally.

Students in the Drawing Courses will also be expected to undertake exercises to be worked out during the week. They will be required to provide themselves with the necessary instruments.

Fee, for the course, together with that on Geometrical Drawing, 10/6 for two Terms; 7/- for one Term.

GEOLOGY.

Professor, W. J. Sollas, M.A.

Thursday, 7—9.

The Geological Structure of the Country round Bristol.

This course will be delivered during the first and second Terms, and will be chiefly devoted to a consideration of the subjects enumerated under Part II., illustrated by examples from the neighbourhood of Bristol. The hours are from 7 to 9 in order to afford an opportunity for occasional practical work by the microscope.

Part I.—The general form and structure of the Earth. The Atmosphere. Wind and Rain. Rivers and Glaciers. The Ocean; its Tides and Currents. The North Atlantic Sea-floor. The Waste and Renovation of Continents. Volcanoes: their Life-history and Causation. Earthquakes. Movements in the Earth's Crust: the Raising of Land up from the Sea and its Depression beneath it. The State and Temperature of the Interior of the Earth.

Part II.—The Archean system: the oldest known Rocks and their supposed Fossils. Cambrian system: Slate and its origin. Silurian system: ancient Volcanoes. The Lakes of the old Red Sandstone. Carboniferous system: Coal and its origin. Permian and Trias: Salt Lakes and their products: Jurassic system: Coral Reefs and the Cotswold Hills. The Neocomian Continent: its River and the Delta of the Weald. The axis of London and Harwich. Cretaceous period: how the Chalk grew; some results of the "Challenger" Expedition. Eocene and Miocene systems: Volcanoes of the Inner Hebrides. Pliocene system: first signs of the Ice-age. Pleistocene system: *mer de glace* of Scotland. Early English savages and their surviving descendants.

Excursions.

In the summer Term excursions will be made to various localities in the neighbourhood with the object of studying practically the more important formations.

Fee, 10/6 for two Terms; 7/- for one Term.

BOTANY.

Lecturer, Adolph Leipner.

An elementary course of lectures on Structural and Physiological Botany, and on the classification, technical description and identification of the wild plants of the neighbourhood will be given every Wednesday and Friday from 7 to 8, during the second and third Terms.

The Botanical Garden recently formed is at all times accessible to the students, and gives every opportunity for illustration and study.

Text-books. — *Text-book of Botany*, by Prantl and Vines; Hooker's *Students' Flora of the British Islands;* or Babington's *Manual of English Botany.*

Fee, 10/6 for two Terms; 7/- for one Term.

MODERN HISTORY.

Professor, J. Rowley, M.A.

Monday, 7—9.

There will be one lecture and one class every week during the first and second Terms. The class will be continued in the third Term until June 10th. The subject for the next Session will be the History of England from the Restoration to the death of William III.

There will be an examination at the end of the first and the second Term.

Fee, 15/- for three Terms; 10/6 for two Terms; 7/- for one Term.

ENGLISH LITERATURE.

Professor, J. ROWLEY, M.A.

Wednesday, 7—9.

There will be one lecture and one class every week during the first and second Terms. In the third Term the class will be continued every Tuesday until June 10th. The subject for the next Session will be English Literature from Chaucer to Spenser.

The selected books of the first part of Group A of Cambridge University Higher Local Examination will be among the books read at class.

There will be an examination at the end of the first and second Term.

Fee, 15/- for three Terms; 10/6 for two Terms; 7/- for one Term.

GREEK.

Professor, R. FANSHAWE, M.A.

Lecturer, EDWARD BUCK, M.A.

Monday, Wednesday and Friday, 7—8.

The work of these classes will be arranged in three divisions, Elementary (Wednesday), Middle (Friday), and Advanced (Monday); in each of which instruction will be given in Translation, Grammar and Composition. The authors to be read will be chosen in reference to the wants of the students who present themselves, special provision being made for candidates for the London University Examinations, the Oxford Examination for Women and the Cambridge Higher Local Examination. Students are entitled to attend *any two* divisions for a single fee.

Fee, 15/- for three Terms; 10/6 for two Terms; 7/- for one Term.

LATIN.

Professor, R. FANSHAWE, M.A.

Lecturer, EDWARD BUCK, M.A.

Monday, Wednesday and Friday, 8—9.

The same arrangements will be observed as in the Greek Classes. The Elementary Class will be held on Wednesdays, the Middle Class on Fridays, and the Advanced Class on Mondays.

Fee, 15/- for three Terms; 10/6 for two Terms; 7/- for one Term.

FRENCH LANGUAGE AND LITERATURE.

Lecturer, EUGÈNE PELLISSIER, M.A., LL.B., B.Sc.

ELEMENTARY CLASS FOR MEN.—Monday, 7—9.

Accidence (Brachet's *Elementary French Grammar*). Exercises and Supplementary Exercises on Brachet's *Elementary French Grammar* (Hachette's edition). Voltaire, *Charles XII.* (Hachette's edition).

ADVANCED CLASS FOR MEN.—Thursday, 7—9.

Accidence and Syntax (Brachet's *Elementary French Grammar*). *The graduated course of translation, Part I., Junior Course*, Cassal and Karcher. Mérimée, *Colomba* (Hachette's *Modern French Authors, Vol. XIV.*)

Lecturer, A. D'OURSY, B.A.

ELEMENTARY CLASS FOR WOMEN.—Friday, 7—9.

1.—Exercises in Chardenal's Standard French Primer. Practice in letter writing.

2.—Translation in Chardenal's French Reader.

3.—Grammar. Accidence. Regular and most of the irregular verbs.

4.—Practice in French conversation.

ADVANCED CLASS FOR WOMEN.—Tuesday, 7—9.

1.—Translation from French into English of French Classics, volume v., G. Masson. (Clarendon Press, Oxford.)

2.—French Composition by Kastner (Hachette's edition). Accidence and Syntax—d'Oursy's Grammar. Practice in letter writing.

3.—Lectures on French literature on the period set for the Cambridge Higher Local Examination. Students preparing for this examination require the following text-books:—

Dictionnaire Etymologique (Brachet); *Histoire de la Litérature Française* (E. Geruzez); *Historical Grammar of the French Language* (Brachet).

Fee, 15/- for three Terms; 10/6 for two Terms; 7/- for one Term.

GERMAN LANGUAGE AND LITERATURE.

Lecturer, ADOLPH LEIPNER.

Instruction will be given in the German Language and Literature every Wednesday and Friday from 8 to 9.

Text-books.—Otto's *Conversational German Grammar;* Fasnacht's *Selections from Uhland's Ballads and Romances* (Macmillan and Co.)

Fee, 15/- for three Terms; 10/6 for two Terms; 7/- for one Term.

GENERAL TIME TABLE OF EVENING CLASSES.

	Monday	Tuesday.	Wednesday.	Thursday.	Friday.
CHEMISTRY .. .. (a)	—	—	8	—	8
" Technical .. .. .. (a)	—	8	—	—	—
MATHEMATICS .. .. (e)	*7 to 9	—	—	*7 to 9	—
SOUND, HEAT AND LIGHT .. .. (a)	—	7 & *8	—	—	—
ELECTRICITY AND MAGNETISM .. (a)	—	—	—	7 & *8	—
Laboratory Instruction .. (a)	—	—	7 to 9	—	—
APPLIED MECHANICS AND STEAM (a)	—	—	—	—	7 & *8
GEOMETRICAL AND MACHINE DRAWING .. .. (a)	—	—	*7 to 9	—	—
GEOLOGY .. .. (a)	—	—	—	†7 to 9	—
BOTANY .. .. (c)	—	—	†7	—	†7
MODERN HISTORY .. .. (a) (d)	7 & *8	—	—	—	—
ENGLISH LITERATURE .. .. (a) (d)	—	—	7 & *8		—
GREEK—					
Elementary	—	—	*7	—	—
Middle	—	—	—	—	*7
Advanced	*7	—	—	—	—
LATIN—					
Elementary	—	—	*8	—	—
Middle	—	—	—	—	*8
Advanced	*8	—	—	—	—
FRENCH—					
(Men) Elementary	*7 to 9	—	—	—	—
" Advanced	—	—	—	*7 to 9	—
(Women) Elementary	—	—	—	—	*7 to 9
" Advanced	—	*7 to 9	—	—	—
GERMAN	—	—	*8	—	*8

The instruction in the hours marked with * will take the form of class teaching.
The instruction in the hours marked with † will in some part take the form of class teaching.

(a) During the first and second Terms; (b) during the first Term only; (c) during the second and third Terms only; (d) these courses will be continued during the third Term by classes held from 7 to 8 and 8 to 9 respectively, on Mondays, until June the 10th; (e) Students in this class may attend either on Mondays or Thursdays.

EXAMINATIONS OF EVENING CLASSES.

LIST OF HONOURS.

INORGANIC CHEMISTRY.

Class I.	Class II.
First Term:—	
Henry E. Trew, Charles H. Bray.	Frederick G. Warren.
Second Term:—	
Henry E. Trew, Frederick G. Warren.	James H. Shindler.

TECHNICAL CHEMISTRY.

First Term:—

Henry W. Williams,
G. Walter Harrison,
A. Marshall Hunt.

ELECTRICITY AND MAGNETISM.

Second Term:—

Ernest M. Parsons,
George D. Harding.

HEAT AND LIGHT.

Second Term:—

Sarah H. Pridham.

APPLIED MECHANICS AND STEAM.

First Term:—	
Herbert Ashmead, Arthur E. Mills, E. May Munro.	Ernest M. Parsons, George D. Harding, Edward Rogers.
Second Term:—	
Arthur E. Mills, Herbert Ashmead.	Joseph G. Prosser, Alfred E. E. Raggatt.

GEOMETRICAL DRAWING.

CLASS I. CLASS II.

First Term :—

Arthur E. Mills,
Herbert Ashmead,
Alfred E. E. Raggatt,
Frank J. Payton.

Second Term :—

Herbert Ashmead,
Arthur E. Mills,
Alfred E. E. Raggatt.

Frank J. Payton,
Joseph G. Prosser

MACHINE DRAWING.

Second Term :—

Herbert Ashmead,
Arthur E. Mills,
Frank J. Payton.

Alfred E. E. Raggatt,
Joseph G. Prosser,
Arthur H. R. Pope.

GEOLOGY.

First Term :—

Annie C. Evers,
Harry Fisher,
Emma Lewis,
Mary T. Pakeman,
Reginald I. Pocock.

Second Term :—

Joseph C. Chandler,
Reginald I. Pocock,
Mary T. Pakeman.

BOTANY.

Second Term :—

Frank Calder,
Frank Oram.

POLITICAL ECONOMY.

Second Term :—

Herbert Grundy.

Amy G. Baynes,
Mrs. Herapath,
Hugh G. Marshall,
Haddon D. Smith.

ENGLISH LITERATURE.

Second Term :—

Diana Thomas,
Georgina Browne,
Alice Thomas.

Elizabeth Parnall,
Mary Maturin,
Emily M. Christian,
Mabel P. Nunn.

FRENCH.

MEN.

ELEMENTARY.

CLASS I.	CLASS II.
First Term:—	
Charles Isaac, John H. Hooper.	
Second Term:—	
Frank Calder.	

ADVANCED.

First Term:—	
Henry C. Webb.	Andrew Kerr, Jasper White, Henry A. Reed.
Second Term:—	
William H. Holloway, Henry A. Onn.	Jasper White, Henry C. Webb, Henry A. Reed.

WOMEN.

ELEMENTARY.

First Term:—	
	L. Henrietta Drew, Marion Loxton, Henrietta E. Castle, Louisa G. Castle, Ellen E. Spencer.
Second Term:—	
	Mabel C. King, Mirah G. Liscombe. L. Henrietta Drew, Marion Loxton, Ellen E. Spencer.

ADVANCED.

First Term:—	
Mary E. I. Pocock.	Elizabeth Parnall, Emily M. Christian.
Second Term:—	
Emily P. Pakeman, Mary E. I. Pocock.	Elizabeth Parnall, Emily M. Christian.

GERMAN.

Second Term:—	
Grace M. Wadsworth.	Mary E. I. Pocock, Kate Brown, Edith I. Lawrence.

The list of Honours obtained in the Examinations at the end of the third Term will be found in the Appendix.

STUDENTS OF THE COLLEGE.

Session 1882-83.

Day.

Arthur, Edward M.
Baber, Edith M.
Badock, Stanley H.
Baggs, Edwin
Barker, George H.
Barrow, Alfred
Beddoe, John C.
Bengough, Beatrice E.
Bengough, Cyril F.
Berridge, Catharine E.
Bloxsome, Gerald W.
Bower, Eliza A.
Bradley, Katharine H.
Bray, Charles H.
Bridger, Edith E.
Bright, Henry
Bruce, Florence M.
Bruce, John
Budgett, Alice M.
Budgett, Constance
Budgett, Edith R.
Castle, Louisa G.
Cave, Edith F.
Clarke, Edith M.
Cooper, Amy K.
Cooper, Edith E.
Cordeux, Alice
Cox, Lilian F.
Cruikshank, James W.
Cummins, Florence E. N.
Daniel, Edgar B. R.
Davies, David M.
Davies, Mary M.
Dymond, Edmund R.
Eaves, George
Evans, Frances L.
Evans, Franklen P.
Evans, Howard B.
Evans, Trevor H.
Foster, Henry L. T.
Fox, Anna
Fry, Elizabeth W.
Fry, Ernest H.
Fry, George F.
Garaway, Emily M.
Garnett, Meta
Gillford, Arthur J.
Glanville, William
Glasson, J. Reed
Gooch, Katie
Greenslade, Sarah J.
Grove, Norah M.
Gubbins, Francis
Hallam, Evelyn D.
Hardy, Charles C.
Hargrave, Andy B.
Harrison, G. Walter
Hartnell, Mary A.
Heynes, George H.
Hiatt, Clara L.
Hildige, Emily M.
Hildige, Louisa F.
Hiortdahl, Augusta
Hunter, Thomas
Huntley, Frederick A.
Hyde, John D.
Jacques, Herbert I.
James, Alice M.
Jefferis, Walter H.
Jones, John H.
Joseph, Arthur H.
Knight, James
Lane, Ellen S.
Lane, Odiarne C.
Lansdown, Robert G. P.
Lawrence, Emma E.
Leche, Arthur
Leipner, William A.
Leonard, Ellen M.
Leonard, Ethel I.

Leonard, Norman
Lovell, Edward
Lysaght, Arthur R.
McMurtrie, George E. J.
Maine, Albert J.
Mansfield, Katharine R.
Marshall, E. Beatrice
Martyn, Agnes K.
Metcalfe, Arthur W.
Metcalfe, Gertrude E.
Mildmay, Walter J.
Moor, Ethel C.
Moorsom, Warren M.
Morgan, Evan
Morgan, Nellie M.
Morgan, Samuel W.
Munro, Hector D.
Nickalls, Edward C.
Nunn, Mabel P.
Oakley, Edward M.
O'Brien, Constance
O'Brien, Florence
Ogilvie, Margaret
Ogilvie, Mary
Owen, George F.
Palmer, Frank T.
Paterson, Walter
Pope, Arthur H. R.
Pratt, Charles E.
Price, Celia W.
Price, Edna H.
Ramsay, Mrs.
Reed, Henry A.
Rendell, Alfred C. G.
Richards, Amelia M.
Roscoe, William M.
Ross, William
Sewell, Mary
Shaw, Frederick G.
Shindler, James H.
Smith, Harry M.
Smyth, Frederic
Steadman, Bessie
Stiles, Theodore M.
Sturge, Caroline
Sturge, Helen M.
Swan, Cameron
Swayne, Walter C.
Taylor, Maurice
Taylor, William
Temple, George H.
Thomas, Herbert J.
Thomas, S. Silvester
Thomson, William
Tucker, Robert F. W.
Turner, Edith M.
Wait, A. Beatrice
Wait, Mary E.
Wakefield, Roger W.
Wansey, Arthur A.
Ward, Ernest
Waring, Flora M.
Watts, Nicholas
Wethered, Arnold
Wethered, Frank J.
Whibley, Gertrude
Whitwell, Henrietta
Williams, Henry W.
Williams, Katharine I.
Williams, Mary
Williams, P. Watson
Wilson, Edith C.
Wise, Annie H.
Woodward, George S.
Worsley, Bertha

Evening.

Ashmead, Herbert
Ashwin, Harriett E.
Ashworth, Alice E.
Austin, Meta
Badock, Edith M.
Badock, Stanley H.
Baker, Herbert M.
Baker, Hiatt C.
Baker, Kate E.
Baker, Mrs. Mills
Baker, Thomas
Baker, W. Mills
Barclay, Brenhilda
Barclay, Theodora F.
Bartlett, J. Wallis
Bawn, Alice S.
Baynes, Amy G.
Beall, Eva
Beall, Kate
Beddoe, Sophia
Bennett, Henry C.
Berry, Edward E.
Bevan, William
Blake, Katharine G.
Boyce, Henry
Boycott, Frances G.
Bradley, Katharine H.
Bray, Charles H.
Brayley, Edith M.
Brooks, Alfred W. B.
Brooks, Henry T. A.
Brotherhood, Charles
Brown, Kate
Browne, Amy J.
Browne, Georgina
Bucknell, William
Byrnes, Alice
Calder, Frank
Carter, Edward T.
Cary, Elizabeth A.
Castle, Henrietta E.
Castle, Louisa G.
Chandler, Joseph C.
Christian, Emily M.
Church, Emily J.
Clarke, William C.
Clarkson, Ethel
Clarkson, May
Cleal, Edward E.
Clinch, Susan
Cocks, Elizabeth A.
Cogan, Clifford G.
Collins, Arthur J.
Collins, Blanche
Cooper, Amy K.
Crosby, Walter L. J.
Curteis, Ethel L.
Daniell, James L.
Daniell, Mrs.
Daunton, Julia
De Richard, Mademoiselle
Derrick, Marshall A.
De Soyres, Francis J.
Desprez, Arthur
Dickson, Mary C.
Drew, L. Henrietta
Dunscombe, Adeliza A.
Dunscombe, Matthew W.
Durrant, Henry J.
Eaves, George
Evans, Franklen P.
Evans, Trevor H.
Evers, Annie C.
Eyles, Florence
Firth, Amy
Firth, Hester
Fisher, Harry
Fisher, Sarah
Flight, Elizabeth
Flook, Herbert B.
Fox, Arthur J.
Fox, Madeline L.
Frank, Louisa
Freeman, Annie C.
Gabriel, James N.
Gibbons, Harriot E.
Gibbons, Maria
Giblett, Annie E.
Gillard, Julia
Gotch, Frederic W.
Gough, Ernest W.
Graham, H. W. Gore
Green, George
Gregory, Harry C.
Griffiths, William C.
Grundy, Herbert
Gurnsey, Charles E.
Hall, Arthur V.
Hall, Harry
Harding, George D.

Harrison, G. Walter
Haslewood, Kate
Hawkes, William H.
Herapath, Florence
Hiatt, Clara L.
Higgs, Herbert J.
Hindley, Leonard
Hodges, Thomas
Holloway, William H.
Hollway, Leonard C.
Hooper, John H.
Hunt, A. Marshall
Huntley, Frederick A.
Isaac, Charles
Isaac, Jessie M.
James, Arthur V.
James, Harry
Jellicoe, Mary
Jenner, Alice
Jones, William L.
Keevill, Arthur G.
Kerr, Andrew
King, Mabel C.
Knibbs, Henry W. B.
Lancaster, Henrietta
Lander, Sydney E.
Lawrence, Edith I.
Lawrence, Ella W.
Lawrence, Emma E.
Lawson, William
Lemon, Alice M.
Leonard, Ellen M.
Le Ray, Edwin
Levy, Arthur A.
Lewis, Emma
Lilly, Richard G. B.
Liscombe, Mirah G.
Long, William T.
Lovell, Edward
Loxton, Marion
Mackenzie, Maria
Macmillan, Charles D. H.
Major, Elizabeth
Manley, Emily
Manley, Harriet A.
Mark, Henry J.
Marshall, Hugh G.
Martin, Abel
Maturin, Mary
Merrick, Frank
Mills, Arthur E.
Mills, Louisa
Moore, Ethel C.
Mordy, Charles
Morrish, Edmund
Mountfield, Margaret
Mulleny, Ernest W.
Munro, E. May
Nickalls, Edward C.
Nickolls, Nelly
Noble, William A.
Nott, Jane P.
Nunn, John J.
Nunn, Mabel P.
O'Carroll, Phœbe
Onn, Henry A.
Oram, Frank
Pakeman, Edith
Pakeman, Emily
Pakeman, Mary T.
Palmer, Frank T.
Parnall, Elizabeth
Parsons, Ernest M.
Payton, Frank J.
Peck, Alice M.
Peckett, John F.
Peckett, Thomas
Percy, Minnie
Percy, Sophie
Perry, Mary
Peters, Edward A.
Pethick, William A.
Phelps, Lydia M.
Pillers, Ernest J.
Pitt, Benjamin
Pitt, Edith A.
Pitt, Rachel W.
Pockson, William E.
Pocock, Mary E. I.
Pocock, Reginald I.
Pole, Thomas
Pope, Arthur H. R.
Powell, Alfred W.
Powell, Charles H.
Prentice, Herbert N.
Prichard, Sarah N.
Prideaux, Amy
Prideaux, Augusta
Pridham, Caroline
Pridham, Maria
Pridham, Sarah H.
Priestley, Edgar
Pring, Sarah J.
Prosser, Joseph G.

Raggatt, Alfred E. E.
Read, Edward H.
Read, Robert H.
Reed, Henry A.
Richards, Annie E.
Richards, Humphrey W.
Richardson, John E.
Riddell, Mary C.
Riddle, Mary A.
Rinder, Sinclair
Roberts, Frances L.
Roberts, Harriette E.
Rogers, Edward
Ross, Lillie A.
Ross, William
Rossiter, Emily
Rowles, Archibald M.
Scrase, Frank E.
Scriven, Tabitha
Sharp, Joseph T.
Shaw, Walter
Sherring, Hugh J.
Shindler, James H.
Sinclair, David
Slater, Alexander
Smith, Alfred C.
Smith, Caroline M.
Smith, Charlotte
Smith, Haddon D.
Smith, Harry M.
Smith, Frederick
Snow, Alexander D.
Spencer, Ellen E.
Spencer, Mrs.
Stewart, Annie S.
Strachan, Ellison
Strachan, Eva
Streckeisen, Anna
Sturge, Elizabeth
Sturge, Theodore
Sydenham, James C.
Tanner, William E.
Taylor, John F.
Thomas, Alice
Thomas, Diana
Thomas, Ellen A.
Thomas, George
Thomas, Thomas
Thwaites, John H.
Tomkins, Kate
Tomlinson, Thomas B.
Townsend, Charles K.
Trew, Henry E.
Tucker, William L.
Tuckey, Kate
Tyrrell, Edwin M.
Viney, Edwin
Vowles, Frederick
Wadsworth, Grace M.
Walker, Margaret A.
Walsh, Elizabeth L. G.
Ware, Fabian A. E.
Ware, John C.
Ware, Mrs.
Waring, Flora M.
Warren, Frederick G.
Warry, George W.
Waterman, Lewis H.
Watson, Thomas
Watts, Nicholas
Wearing, Jessie B.
Webb, Henry C.
Webber, Frank
Wedmore, Constance
Weedon, Marion L.
Wheeler, Catherine A.
Wheeler, George E.
Whibley, Frederick G.
White, Jasper
Whithead, Thomas J.
Wiggins, Albert J.
Wiggins, Henry R.
Williams, Henry W.
Williams, James
Willis, Frederick J.
Wills, John G.
Willway, Frederick G.
Willway, Herbert
Willway, John B.
Wilmot, Samuel M.
Wood, John W.

The above are exclusive of Students of the Medical School not attending College Classes.

FORM OF BEQUEST.

I give to University College, Bristol, the sum of £ to be paid out of such part of my personal estate as I can lawfully charge with the payment of legacies to charitable uses, and to be paid free of legacy duty, within from my death, to the Treasurer, for the time being, of the said College, whose receipt shall be a sufficient discharge for the same.

BRISTOL MEDICAL SCHOOL,

AFFILIATED TO

UNIVERSITY COLLEGE,

BRISTOL.

SESSION 1883-1884.

THE WINTER SESSION

Will commence on MONDAY, October 1st, 1883, and will continue for Six Months, with a Recess at Christmas.

THE SUMMER SESSION

Will commence on THURSDAY, May 1st, 1884, and will terminate at the end of July.

ADMISSION OF STUDENTS.

Attendance will be given to enter Students and to issue Cards of Admission to Classes* on the following days:—

Winter Session:—MONDAY, October 1st, 4 to 5 p.m.
Summer Session:—THURSDAY, May 1st, 4 to 5 p.m.

E. MARKHAM SKERRITT, M.D.,
Honorary Secretary.

MEDICAL SCHOOL, UNIVERSITY COLLEGE,
TYNDALL'S PARK, BRISTOL.

* See Regulation 3, p. 10.

GOVERNING BODY.

W. PROCTOR BAKER, Esq. (1), Treasurer to University College; President of the Bristol General Hospital, *Chairman*.

E. C. BOARD, M.R.C.S. (4), Senior Surgeon to the Bristol Royal Infirmary.

G. F. BURDER, M.D., F.R.C.P. (5), Senior Physician to the Bristol General Hospital.

Rev. J. W. CALDICOTT, D.D. (1), Head Master of the Bristol Grammar School.

C. D. CAVE, Esq. (2), President of the Bristol Royal Infirmary.

ALBERT FRY, Esq. (1), Chairman of the Council of University College.

LEWIS FRY, Esq., M.P. (1), Vice-Chairman of the Council of University College.

E. LONG FOX, M.D., F.R.C.P. (4), Consulting Physician to the Bristol Royal Infirmary.

W. MICHELL CLARKE, M.R.C.S. (5), Consulting Surgeon to the Bristol General Hospital.

Professor B. JOWETT, M.A. (1), Master of Balliol College, Oxford.

F. P. LANSDOWN, M.R.C.S. (5), Senior Surgeon to the Bristol General Hospital.

HENRY NAISH, Esq. (3), Treasurer to the Bristol General Hospital.

AUGUSTIN PRICHARD, F.R.C.S. (4), Consulting Surgeon to the Bristol Royal Infirmary.

E. MARKHAM SKERRITT, M.D. Lond., B.S., B.A., M.R.C.P. (6), Physician to the Bristol General Hospital; Lecturer on Medicine at the Medical School, *Honorary Secretary*.

R. SHINGLETON SMITH, M.D. Lond., B.Sc., M.R.C.P. (6), Physician to the Bristol Royal Infirmary; Lecturer on Physiology at the Medical School.

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1. Elected by the Council of University College.
2. Elected by the Committee of the Bristol Royal Infirmary.
3. Elected by the Committee of the Bristol General Hospital.
4. Elected by the Staff of the Bristol Royal Infirmary.
5. Elected by the Staff of the Bristol General Hospital.
6. Elected by the Faculty of the Bristol Medical School.

COURSES OF LECTURES.

WINTER SESSION.

MEDICINE.

WILLIAM H. SPENCER, M.A., M.D. Cantab., Physician to the Bristol Royal Infirmary; and
E. MARKHAM SKERRITT, M.D. Lond., B.S., B.A,, M.R.C.P., Physician to the Bristol General Hospital.

SURGERY.

NELSON C. DOBSON, F.R.C.S., Surgeon to the Bristol General Hospital.

DESCRIPTIVE AND SURGICAL ANATOMY.

F. RICHARDSON CROSS, M.B. Lond., F.R.C.S., Surgeon to the Bristol Royal Infirmary.

PRACTICAL ANATOMY.

DEMONSTRATOR—WILLIAM H. HARSANT, F.R.C.S., Assistant Surgeon to the Bristol Royal Infirmary.

This Department is under the superintendence of the Lecturer on Anatomy. The Demonstrator and the Medical Tutor direct the Students in their dissections.

PHYSIOLOGY.

R. SHINGLETON SMITH, M.D. Lond., B.Sc., M.R.C.P., Physician to the Bristol Royal Infirmary.

CHEMISTRY.

THOMAS COOMBER, F.C.S., Master of the Bristol Trades and Mining Schools.

HYGIENE.

DAVID DAVIES, M.R.C.S., Medical Officer of Health to the City and County of Bristol.

SUMMER SESSION.

MIDWIFERY AND DISEASES OF WOMEN.

JOSEPH G. SWAYNE, M.D. Lond., Consulting Physician-Accoucheur to the Bristol General Hospital; and

A. E. AUST LAWRENCE, M.D., Physician-Accoucheur to the Bristol General Hospital.

MEDICAL JURISPRUDENCE.

REGINALD EAGER, M.D. Lond.; and
ALFRED J. HARRISON, M.B. Lond., Physician to the Bristol General Hospital.

This Course includes Lectures on the various forms of Insanity.

PATHOLOGY AND MORBID ANATOMY.

WILLIAM H. SPENCER, M.A., M.D. Cantab., Physician to the Bristol Royal Infirmary; and
E. MARKHAM SKERRITT, M.D. Lond., B.S., B.A., M.R.C.P., Physician to the Bristol General Hospital.

OPERATIVE SURGERY AND SURGICAL PATHOLOGY.

W. POWELL KEALL, M.R.C.S., Surgeon to the Bristol General Hospital.

In this Course each Student performs surgical operations on the dead body. The Course also includes the examination of diseased structures, as illustrated in the contents of the Museum and otherwise.

PRACTICAL SURGERY.

ARTHUR W. PRICHARD, M.R.C.S., Surgeon to the Bristol Royal Infirmary.

This Course includes the following subjects:—The application of anatomical facts to Surgery, on the living person and on the dead body. The methods of proceeding and the manipulations necessary in order to detect the effects of disease and accidents on the living person and on the dead body. The use of Surgical Apparatus.

MATERIA MEDICA AND THERAPEUTICS.

JOHN E. SHAW, M.B. Edin., Physician to the Bristol Royal Infirmary.

PRACTICAL PHYSIOLOGY AND HISTOLOGY.

GEORGE F. ATCHLEY, M.B. Lond., Consulting Surgeon to the Bristol General Hospital.
DEMONSTRATOR—G. MUNRO SMITH, M.R.C.S., L.R.C.P.

This Course includes instruction in the use of the microscope, the examination of the various tissues and organs of the body, and the use of physiological instruments and apparatus.

Each Student is required to provide himself with an efficient microscope and accessory apparatus.

BOTANY.

ADOLPH LEIPNER, Lecturer on Botany in University College.

The Students of this Class attend the Lecturer on Botanical Excursions on Saturday afternoons.

PRACTICAL CHEMISTRY.

THOMAS COOMBER, F.C.S., Master of the Bristol Trades and Mining Schools.

COMPARATIVE ANATOMY.

W. J. SOLLAS, M.A. Cantab., Professor of Geology and Zoology in University College.

Lectures will be given in conformity with the regulation for the Licence in Dental Surgery of the Royal College of Surgeons if a sufficient number of pupils present themselves.

TIME TABLE.

Winter Session.								Summer Session.							
Classes.	M.	Tu.	W.	Th.	F.	S.	Hours.	Classes.	M.	Tu.	W.	Th.	F.	S.	Hours.
Chemistry	×		×		×		9 a.m.	Practical Physiology	×		×		×		8 a.m.
Physiology	×		×		×		10 a.m.	Botany		×		×		×	8 a.m.
Anatomy		×		×		×	9 a.m.	Practical Chemistry...	×		×		×		9 a.m.
					×		11 a.m.	Materia Medica... ...		×		×		×	9 a.m.
Medicine...	×		×		×		9 a.m.	Midwifery	×	×	×	×	×		8 a.m.
Surgery		×		×		×	9 a.m.	Practical Surgery ...		×		×		×	9 a.m.
Hygiene	×				×		10 a.m.	Pathology	×		×		×		9 a.m.
								Operative Surgery ...		×	×		×		10 a.m.
								Medical Jurisprudence	×			×		×	10 a.m.
								Comparative Anatomy		×	×		×		10 a.m.

HOSPITAL PRACTICE:—

Royal Infirmary—Medical and Surgical Practice, at 12 noon daily. Operations, Tuesday and Friday, at 1.30 p.m.
General Hospital—Medical and Surgical Practice, at 1 p.m. daily. Operations, Thursday, at 1.30 p.m.

FEES.

Chemistry	£5 5s. for each Course.
Physiology	
Anatomy	
Medicine	
Surgery	
Midwifery	£4 4s. for each Course.
Comparative Anatomy	
Botany	£3 3s. for each Course.
Practical Physiology	
Practical Chemistry	
Materia Medica	
Practical Surgery	
Operative Surgery	
Pathology	
Medical Jurisprudence	
Hygiene	£2 2s. for each Course.

Medical Tutor Fee.—Students of Anatomy or Physiology are required to pay a Medical Tutor Fee of £2 2s. *per annum*.

Practical Anatomy.—Students not belonging to the Anatomical Class may dissect on payment of a fee of £3 3s. per Session, in addition to the Medical Tutor Fee.

COMPOSITION FEE.—A Composition Fee of Sixty Guineas is received, which entitles the Student to the full courses of Lectures required for the Degrees of the University of London, and the diplomas of the Royal College of Physicians, the Royal College of Surgeons (Membership), the Society of Apothecaries, and the Army and Navy Boards. The fee includes instruction by the Medical Tutor for two years. Should any Student fail to attend any course with sufficient regularity, unless from illness or other cause deemed satisfactory, he will have to attend again, and to pay the fee for such course beyond what he has already paid in the Composition Fee.

The Composition Fee may be paid in one sum, at the commencement of the first Session; or in two instalments, of 40 guineas at the beginning of the first Session, and 20 guineas at the beginning of the second Session.

Hospital Practice.—For fees for Hospital Practice see pp. 20 and 26.

INFORMATION FOR STUDENTS.

Every Student, prior to the commencement of professional studies, is required to pass one of the Preliminary Examinations in Arts prescribed by the General Medical Council. [See foot-note.] After having passed such an examination he must be registered as a Student of Medicine at the office of the Medical Council (315 Oxford Street, London). Information on these subjects may be obtained from the Honorary Secretary to the Bristol Medical School.

Students can complete in Bristol the entire course of study required for the Medical and Surgical Degrees of the University of London, and for the Diplomas of the Royal College of Physicians of London, the Royal College of Surgeons of England, the Apothecaries' Society of London, and the Army and Navy Boards. The lectures and instruction given at University College, Bristol, prepare for the various Preliminary Arts Examinations above referred to, and also for the Matriculation* and Preliminary Scientific Examinations of the University of London; while the Medical School, the Royal Infirmary, and the General Hospital together provide for every detail of the professional curriculum required by the University of London and the above Examining Boards.

Every Student is required to pursue his medical studies for a period of four years from the date of resignation before he can present himself for final examination and obtain a licence to practice. The period during which a Student must attend lectures and hospital practice, and the regulations as to the course of study, vary according to the degree or diploma he may wish to obtain. The lectures and hospital practice required by the Royal Colleges of Physicians and Surgeons and the Apothecaries' Society *can* be attended in three years. But candidates for the diplomas of these

* The University of London holds Matriculation Examinations at University College, Bristol, as one of its provincial centres, in June; and the Preliminary Examinations of the College of Preceptors, which are also recognised by the General Medical Council, are held at University College, Bristol, in March and September.

bodies must be engaged in the acquirement of professional knowledge during a fourth year. It is, therefore, strongly recommended that the compulsory work should not be compressed into the minimum time allowed, but should be distributed over the whole period of four years, according to the plan laid down on pages 12 and 13. Thus ample time will be permitted for the effectual study of each subject in its proper place in the curriculum, and the Student will be able to devote himself solely to the subjects of the several examinations as the time for passing them arrives.

All necessary information as to the course to be pursued for any particular degree or diploma will be given by the Honorary Secretary to the Bristol Medical School. Further particulars regarding the Infirmary may be obtained from the Dean of the Infirmary Faculty, Mr. F. Richardson Cross, and respecting the Hospital from the Dean of the Hospital Faculty, Dr. Markham Skerritt.

GENERAL REGULATIONS.

1. Every Candidate for admission as a Student is required to produce a satisfactory testimonial of good character.

2. Every Student on his admission is required to subscribe in the General Register a declaration of acquiescence in the Regulations of the School.

3. Cards of admission to all or any of the Classes can be obtained only of the Honorary Secretary, to whom all fees are to be paid in advance. The cards are to be taken to be countersigned by the Lecturers respectively, and *attendance on each Class dates from such signature.*

4. The attendance of Students on Lectures is registered. Periodical Examinations are held in all the Classes in accordance with the requirements of the Examining Boards, and attendance on these examinations is essential.

5. Students intending to present themselves for examination at the Royal College of Surgeons are required to give due notice to the Secretary, and to pass a Test Examination in those subjects on which they will be examined at the College.

6. Certificates of attendance will be withheld from any Student whose conduct or attendance shall be deemed unsatisfactory.

7. In the event of faulty attendance, idleness, or misconduct on the part of any Students, the same will be reported to their parents or guardians after each of the periodical Class Prize Examinations.

8. The discipline of the School generally is under the charge of the Honorary Secretary, or, in his absence, of the Medical Tutor, who will report any instances of misconduct. During the attendance of a Lecturer in any room for the purpose of teaching he is charged with the maintenance of order therein.

9. The power of suspending or expelling any Student for misconduct, whether within the precincts of the School or otherwise, is vested in the Governing Body.

MEDICAL TUTOR.

The Medical Tutor is in constant attendance at the School to assist Students in their practical Anatomical and Physiological studies.

ORDER OF STUDY.

FIRST YEAR.

Winter Session.	Summer Session.
Anatomy (bones, joints, muscles, and viscera).	Botany.
Physiology.	Materia Medica.
Chemistry.	Practical Chemistry.
Dissections.	Practical Physiology & Histology.
Surgical Hospital Practice.	Practical Pharmacy.
Post Mortem Demonstrations.	Surgical Hospital Practice.
	Examination of Surgical Patients.
	Post Mortem Demonstrations.

SECOND YEAR.

Winter Session.	Summer Session.
Anatomy.	Midwifery.
Physiology.	Practical Surgery.
Dissections.	Comparative Anatomy (for F.R.C.S., &c.).
Medical Hospital Practice.	Medical Hospital Practice.
Surgical Hospital Practice.	Surgical Hospital Practice.
Surgical Clinical Lectures.	Surgical Clinical Lectures.
Post Mortem Demonstrations.	*Post Mortem* Demonstrations.

N.B.—At the end of the Second Winter Session *the Student should be prepared to pass the Primary Examination of the Royal College of Surgeons, or the equivalent examination of some other Examining Board.*

THIRD YEAR.

Winter Session.	Summer Session.
Medicine.	Medical Jurisprudence.
Surgery.	Pathology and Morbid Anatomy.
Medical Hospital Practice.	Operative Surgery.
Medical Clinical Lectures.	Medical Hospital Practice.
Surgical Hospital Practice.	Medical Clinical Lectures.
Surgical Clinical Lectures.	Surgical Hospital Practice.
Post Mortem Demonstrations.	Surgical Clinical Lectures.
	Post Mortem Demonstrations.

FOURTH YEAR.

Winter Session.	Summer Session.
Medicine.	Medical Hospital Practice.
Hygiene.	Medical Clinical Lectures.
Medical Hospital Practice.	*Post Mortem* Demonstrations.
Medical Clinical Lectures.	
Post Mortem Demonstrations.	

NOTE.—Students who intend to complete their Lectures and Hospital Practice in three years must attend Lectures on Medicine during the second Winter Session, and Lectures on Clinical Medicine during the Second Winter and Summer Sessions.

DRESSERSHIPS.—Students are strongly advised not to become Dressers until after passing the Primary Examination.

CLINICAL CLERKSHIPS may be most advantageously held in the third or the fourth year.

PRACTICAL MIDWIFERY.—Students who have attended the Midwifery Course will be provided with cases to attend, under the supervision of the Lecturers.

CLINICAL STUDY OF THE DISEASES OF WOMEN (as required for the L.R.C.P. Lond. Exam.).—Six months should be devoted to this subject in the third or the fourth year.

INSTRUCTION IN VACCINATION may conveniently be obtained in the third or the fourth year.

PRIZES AND CERTIFICATES OF HONOUR.

Prizes and Certificates of Honour are publicly distributed at the beginning of each Summer Session to the Students who have been successful in the examinations of the year.

No prize can be obtained twice by the same Student.

Prizes and Certificates of Honour are awarded in *each* of the following subjects:—

For First Year's Students.—Anatomy and Physiology—Chemistry—Materia Medica—Practical Physiology and Histology—Botany—Practical Chemistry.

For Second Year's Students.—Anatomy—Physiology—Practical Anatomy—Midwifery—Practical Surgery. *Certificates* in Comparative Anatomy.

For Third Year's Students.—Medicine (open to Students of the third or the fourth year)—Surgery—Pathology—Medical Jurisprudence—Operative Surgery.

For Fourth Year's Students.—*Certificates* in Hygiene.

HOSPITAL PRACTICE AND CLINICAL LECTURES.

Hospital Practice may be attended either at the Bristol Royal Infirmary or at the Bristol General Hospital (see pages 17 and 24).

BRISTOL ROYAL INFIRMARY.

Honorary and Consulting Physicians:

FREDERICK BRITTAN, M.D.
ALEXANDER FAIRBROTHER, M.D.
EDWARD LONG FOX, M.D.

Honorary and Consulting Surgeons:

JOHN HARRISON, F.R.C.S.
AUGUSTIN PRICHARD, F.R.C.S.

Physicians:

WILLIAM H. SPENCER, M.A., M.D., Cantab., *Lecturer on Medicine and Pathology at the Medical School.*
R. SHINGLETON SMITH, M.D. Lond., B.Sc., M.R.C.P., *Lecturer on Physiology at the Medical School.*
HENRY WALDO, M.D.
JOHN E. SHAW, M.B. Edin., *Lecturer on Materia Medica at the Medical School.*

Surgeons:

EDMUND C. BOARD, M.R.C.S.
CHRISTOPHER H. DOWSON, M.R.C.S.
ARTHUR W. PRICHARD, M.R.C.S., *Lecturer on Practical Surgery at the Medical School.*
F. RICHARDSON CROSS, M.B. Lond., F.R.C.S., *Lecturer on Anatomy at the Medical School.*
J. GREIG SMITH, M.A., M.B., C.M.

Assistant Surgeon:

WILLIAM H. HARSANT, F.R.C.S., *Demonstrator of Anatomy at the Medical School.*

Medical Superintendent:

J. H. LEE MACINTIRE, M.R.C.S.

House-Physician:

J. FENTON EVANS, M.B., C.M., Edin.

House-Surgeon:

J. PAUL BUSH, M.R.C.S.

The Infirmary was founded in the year 1735, and is one of the largest provincial hospitals in England. It contains 264 beds.

The Infirmary has recently undergone a complete renovation in accordance with the most approved modern principles of hospital construction. It includes a large ward exclusively appropriated to children, separate ward for Eye cases and other special purposes, and two wards apart from the main building for cases requiring isolation. It is provided with all the necessary appliances for a complete clinical education.

IN-PATIENTS.

Medical and Surgical cases are admitted daily at eleven o'clock. Nearly 3,000 In-patients are annually treated in the wards.

OUT-PATIENTS.

The Out-patient department is very extensive, upwards of 20,000 patients being annually prescribed for, and the whole of its resources are utilised for the instruction of Students. This department is under the charge of the Physicians and Surgeons and the Assistant-Surgeon. Students have opportunities for examining the cases, and are instructed in diagnosis and modes of treatment. For Students this department is of very great value, as the diseases treated in it constitute the large majority of ordinary cases met with in practice.

THE LIBRARY

contains nearly 3,000 volumes, comprising most of the standard works on Medicine, Surgery, and the cognate sciences; also the Medical Periodicals of the day. Students are allowed to take home any books they may require.

THE MUSEUM

(Founded by Richard Smith, Esq., formerly Surgeon to the Infirmary)

is open to all Students, under the supervision of the Curator. It contains a very large series of preparations of diseased bones; a remarkable collection of calculi, including upwards of 500 groups; numerous pathological preparations, arranged with a special view to the study of pathology; a Materia Medica collection; and a large collection of illustrative microscopic slides.

A Preparation Room and a Histological Room are attached to the Museum, in which the Students have the opportunity of working under instruction and supervision.

THE DISPENSARY AND LABORATORY.

In this department Students are instructed in Practical Pharmacy, the analysis of urine, and other chemical manipulations connected with practical medicine.

CLINICAL INSTRUCTION.

(See Time Table on page 21.)

In the Wards.—The wards are visited daily, by the Physicians at twelve o'clock and by the Surgeons at one o'clock, when Clinical instruction is given to the Students in attendance.

On Saturdays the Physicians meet at one o'clock and the Surgeons meet at half-past one o'clock in the wards for consultation on such cases as may require it.

In the Out-Patient Department.—Instruction is given on four days in the week at twelve o'clock by the Physicians and Surgeons.

Operations are performed, except in cases of emergency, on Tuesdays and Fridays at half-past one o'clock.

Clinical Lectures are given regularly during the Winter and Summer Sessions, by the Physicians on Saturdays at twelve o'clock, and by the Surgeons on Fridays at twelve o'clock. Attendance on these lectures is registered and certificates are given accordingly.

Post-Mortem Examinations are conducted at twelve o'clock under the direction of one of the Physicians or Surgeons or the Medical Superintendent, and demonstrations are given on the cases to the Students in attendance.

Instruction is also given in the following

SPECIAL CLINICAL DEPARTMENTS.

Ophthalmic Department.—Demonstrations and instruction in Diseases of the Eye and the use of the ophthalmoscope are given by Mr. Arthur W. Prichard on Thursdays at eleven o'clock, and by Mr. F. Richardson Cross on Saturdays at eleven o'clock.

Obstetric Department.—Special instruction in Diseases peculiar to Women is given in the wards and out-patient rooms by Mr. J. Greig Smith on Wednesdays at eleven o'clock.

Department for Diseases of the Throat and Ear.—Demonstrations and instruction, including the use of the laryngoscope and other apparatus, are given by Mr. Harsant on Tuesdays at eleven o'clock.

Department for Diseases of Children.—Special facilities are afforded for the study of children's diseases in the ward set apart for the purpose.

CLINICAL APPOINTMENTS.

Dresserships.—Students are appointed to Dresserships after the first year of study. Dressers attend to the patients in the wards and in the out-patient department, and assist at operations under the direction of the Surgeons.

Resident Dresserships.—Students are appointed by the Surgeons from the most diligent and qualified of the Dressers to reside in the Infirmary in weekly rotation. They are in charge of all casualties, under the supervision of the resident Medical Officers. By this privilege, and from the number of accidents happening in the factories, among the shipping and in the neighbourhood generally, they have more than ordinary opportunities for learning Practical Surgery.

Clinical Clerkships.—Students are appointed to Clinical Clerkships in their third and fourth years of study. The Clinical Clerks alone have the privilege of keeping the case-books and visiting the wards by themselves, and they receive special clinical instruction.

Pathological Clerkships.—A Pathological Clerk is appointed every four months from those students who send in their names for the office. It is his duty to make all *Post Mortem* Examinations and keep the pathological register during his term of office, under the direction of one of the Physicians or Surgeons or the Medical Superintendent.

Obstetric Clerkships.—Students who have attended lectures on Midwifery and also entered to the Surgical practice of the Infirmary, may take out an Obstetric Clerkship under the Surgeon

in charge of the Obstetric department. The Obstetric Clerks have the privilege of keeping the case-books and assisting at operations and examinations of patients.

PRIZES.

Suple's Medical Prize, consisting of a Gold Medal of the value of Five Guineas, and about Seven Guineas in money, is given annually to the successful candidate in the Examination held by the Physicians. The examination comprises reports of cases in the medical wards, and the preparation of morbid specimens illustrative of disease, accompanied if possible by microscopic and chemical illustrations, besides written replies to questions in Medicine.

Suple's Surgical Prize corresponds in value and character to the Medical one described above. In this case the examination is conducted by the Surgeons, and comprises Surgical subjects only.

Clarke's Prize.—The interest of £500, bequeathed by the late Henry Clarke, Consulting Surgeon to the Infirmary, will be given annually to the most successful student of the third year at the examinations held at the Medical School, provided he has attended his Hospital Practice at the Bristol Royal Infirmary, and can produce certificates of good moral character.

Tibbits' Memorial Prize.—A prize founded by public subscription in memory of the late R. W. Tibbits, Surgeon to the Infirmary, being the interest of £315, will be offered for competition annually to the advanced students for the greatest proficiency in Practical Surgery.

Crosby Leonard's Prize.—The interest of £300, bequeathed by the late Crosby Leonard, Consulting Surgeon to the Infirmary, will be awarded annually in September to that Student who, during the third year of his attendance on the Surgical practice of the Infirmary, shall in the opinion of the Surgeons furnish the best written reports of ten surgical cases (not being those taken for the Surgical Suple Prize) occurring in the wards.

Pathological Prize.—The Pathological Clerk, at the expiration of his term of office, will receive a prize of the value of Three Guineas, if his duties have been performed to the satisfaction of the Faculty.

ADMISSION OF STUDENTS.

Students may enter for Medical or Surgical Practice for six months or more. Those who enter for Medical or Surgical Practice are entitled to attend the practice of all the Physicians or all the Surgeons at the usual daily visits, and to attend Clinical lectures and the instruction in the special departments. Those who also take out Clinical Clerkships or Dresserships attach themselves to some one Physician or Surgeon, under whose direction they act and from whom they receive special Clinical instruction.

Application for information and admission to be made to the Dean of the Faculty, Mr. F. Richardson Cross.

FEES.

An Entrance Fee of Two Guineas to the Infirmary, and Subscription of One Guinea per annum to the Library.

	Six Months.	One Year.	Perpetual.
Medical Practice ..	7 Guineas	12 Guineas	20 Guineas
Surgical Practice ..	7 "	12 "	20 "
Medical and Surgical Practice together, in one payment		20 "	35 "

The above Fees include Clinical Lectures.

Clinical Clerkship ..	5 Guineas 8 Guineas
Dresserships	5 Guineas for each six months.
Obstetric Clerkship..	3 Guineas for each three months.

All Fees are paid to the Secretary, at the Infirmary.

BRISTOL ROYAL INFIRMARY.

TIME TABLE OF CLINICAL INSTRUCTION.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
Visits to Wards. Physicians.	12.0 *Dr. Shaw.*	12.0 *Dr. S. Smith.*	12.0 *Dr. Spencer.*	12.0 *Dr. Waldo.*	12.0	1.0 *Consultations.*
Visits to Wards. Surgeons.	1.0 *Mr. G Smith.*	1.0 *Mr. Board.*	1.0 *Mr. Cross.*	1.0 *Mr. Dowson.*	1.0 *Mr. Prichard.*	1.30 *Consultations.*
Operations.		1.30			1.30	
Medical Out-patients.	12.0 *Dr. S. Smith.*	12.0 *Dr. Waldo.*	12 0 *Dr. Shaw.*	12.0 *Dr. S. Smith.*		
Surgical Out-patients.	11.0 *Mr. Cross.*	12.0 *Mr. Harsant.*	12.0 *Mr. G. Smith.*	12.0 *Mr. Prichard.*		
Clinical Lectures.					12.0 *Surgical.*	12.0 *Medical.*
Ophthalmic Demonstrations.				11.0 *Mr. Prichard.*		10.30 *Mr. Cross.*
Obstetric Practice.			11 0 *Mr. G. Smith.*			
Demonstrations in Throat and Ear Diseases.		11.0 *Mr Harsant.*				
Post-Mortem Examinations.	At Twelve o'clock.					

BRISTOL GENERAL HOSPITAL.

Honorary and Consulting Surgeons:

ROBERT W. COE, F.R.C.S. W. MICHELL CLARKE, M.R.C.S.
HENRY MARSHALL, M.D., F.R.C.S. Edin., F.R.S. Edin.
GEORGE G. ATCHLEY, M.B. Lond.

Honorary and Consulting Physician-Accoucheur:

JOSEPH G. SWAYNE, M.D. Lond., *Lecturer on Midwifery at the Medical School.*

Physicians:

GEORGE F. BURDER, M.D., F.R.C.P.
E. MARKHAM SKERRITT, M.D. Lond., B.S., B.A., M.R.C.P., *Lecturer on Medicine and on Pathological Anatomy at the Medical School.*
ALFRED J. HARRISON, M.B. Lond., *Lecturer on Medical Jurisprudence at the Medical School.*

Surgeons:

F. POOLE LANSDOWNE, M.R.C.S.
NELSON C. DOBSON, F.R.C.S., *Lecturer on Surgery at the Medical School.*
WILLIAM P. KEALL, M.R.C.S., *Lecturer on Operative Surgery at the Medical School.*
CHARLES F. PICKERING, F.R.C.S.

Physician-Accoucheur:

A. E. AUST LAWRENCE, M.D., *Lecturer on Midwifery and Diseases of Women at the Medical School.*

Dentist:

THOMAS C. PARSON, M.R.C.S., *Lecturer on Dental Mechanics at the Medical School.*

House-Surgeon:

W. J. PENNY, M.R.C.S., L.R.C.P.

Physicians' Assistant:

C. N. CORNISH, M.R.C.S.

Assistant House-Surgeon:

J. R. WOOLBY, M.B. Lond., M.R.C.S., L.R.C.P.

THIS Hospital, founded in 1832, is situated in a populous district near the Docks, Collieries, Manufactories, and Railway Stations, from which sources the Wards are supplied with a great variety of important cases.

The present building was completed and occupied in 1858, and is furnished with many modern improvements. It contains 164 beds, with a special Children's Ward, and also Private Wards and Isolated Wards.

OUT-PATIENT DEPARTMENT.

This Department affords a large and most valuable field of observation. It is under the care of the Physicians and Surgeons, by whom the Students are instructed in the practical examination of patients and the treatment of the various forms of disease here met with.

In-Patients are admitted daily (Sundays excepted) at half-past twelve o'clock.

Out-Patients are admitted daily at the same hour.

Casualties.—Emergencies and casualties are admitted at all hours by the Resident Medical Officers.

SCHOLARSHIPS.

Martyn Memorial Entrance Scholarship.—This Scholarship, of the value of £20, founded by public subscription in memory of the late Dr. Samuel Martyn, Physician to the Hospital, is awarded annually, at the commencement of the Winter Session, after a competitive examination in subjects of general education.

Clarke Scholarship.—A Surgical Scholarship of £15, founded by H. M. Clarke, Esq., of London, is awarded annually, at the end of the Winter Session, after an examination in Surgery.

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The *Martyn Memorial Scholarship* and the *Lady Haberfield Prize*, when not awarded as above, are available for the remuneration of a Museum Curator, to be appointed from amongst the

students after a competitive examination in subjects bearing upon the duties of the office.

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THE LIBRARY.

The Library, with a commodious Reading Room, contains a good and increasing collection of Medical Works, the principal Journals, excellent Microscopes, and other Physical Apparatus. Instruction in the use of the Microscope and Chemical Analysis, in connection with the Clinical Teaching, is given by the Faculty.

THE MUSEUM.

The Museum contains numerous interesting and instructive specimens. Curators and Pathological Clerks are appointed from the Students of the Hospital (see Scholarships, page 23).

CLINICAL INSTRUCTION.

The whole of the practice of the Hospital, including the special Departments mentioned below, is open to the Students of the Hospital.

Wards.—The Wards are visited daily, by the Physicians at two o'clock, and by the Surgeons at half-past one, when general Clinical Instruction is given.

Out-Patient Department.—Instruction is given daily by the Physicians and Surgeons at one o'clock. Students are specially advised to avail themselves of the opportunity which this Department affords of acquiring accuracy in the physical examination of patients and the diagnosis and treatment of disease.

Operations.—Surgical operations, except in cases of emergency, are performed on Thursdays, at half-past one o'clock.

Clinical Lectures are given throughout the Winter and Summer Sessions, by the Physicians on three days of the week, and by the Surgeons every Wednesday at twelve o'clock (see Time Table, page 27).

Post Mortem Examinations are conducted, and Pathological Demonstrations given, by the Physicians and Surgeons at two o'clock.

SPECIAL DEPARTMENTS.

In these Departments instruction is given in the use of the various instruments and appliances special to each.

Diseases of Women.—Dr. Aust Lawrence visits on Mondays and Thursdays at twelve o'clock, and gives Clinical Instruction in the Diseases peculiar to Women.

Diseases of the Skin.—Patients affected with Skin Diseases are seen by Dr. Harrison, at one o'clock, on Fridays.

Diseases of the Eye.—In this Department, Ophthalmic cases are seen on Wednesdays, at one o'clock, by Mr. Keall.

Diseases of the Ear and Throat.—Patients are seen on Mondays, at twelve o'clock, by Mr. Pickering.

Diseases of Children.—In addition to the special Children's Ward in the Hospital, the Out-Patient Department affords abundant material for the study of the Diseases of Children.

Dental Surgery.—Mr. Parson attends on Mondays and Thursdays, at nine o'clock, and gives practical instruction in Dental Surgery.

PRACTICAL PHARMACY.

Private instruction in Practical Pharmacy is given to Students on payment of a Laboratory Fee to the Hospital.

CLINICAL CLERKS, DRESSERS, AND RESIDENT PUPILS.

Clinical Clerks.—While ordinary Pupils enter to the general practice and accompany the Physicians on their usual visits, Students who become Clinical Clerks, besides this, place themselves under one Physician, from whom they receive private instruction in the practice of medicine. The Clinical Clerks alone have the privilege of recording cases and visiting the wards by themselves.

Dressers reside in the Hospital by rotation and free of expense. They have the privilege of dressing the cases in the wards, and of attending the minor casualties, and also the severe accidents, under the direction of the House-Surgeon.

Obstetric Clerks.—Students can enter as Obstetric Clerks, under the Physician-Accoucheur, for periods of three months.

Dressers to the Eye and Ear Departments respectively are appointed from amongst the Students of the Hospital, for periods of three months, without payment of fee.

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BRISTOL GENERAL HOSPITAL.

TIME TABLE OF CLINICAL INSTRUCTION.

	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
VISITS TO WARDS—PHYSICIANS	2 p.m. Dr. Burder. Dr. Markham Skerritt.	2 p.m. Dr. Harrison.	2 p.m. Dr. Markham Skerritt.	2 p.m. Dr. Burder.	2 p.m. Dr. Markham Skerritt. Dr. Harrison.	
VISITS TO WARDS—SURGEONS	1.30 p.m. The Surgeon for the week.	1.30 p.m. Mr. Lansdown. Mr. Dobson	1.30 p.m. Mr. Keall. Mr. Pickering.	1.30 p.m. The Surgeon for the week.	1.30 p.m. Mr. Lansdown. Mr. Dobson.	1.30 p.m. Mr. Keall. Mr. Pickering.
OPERATIONS				1.30 p.m.		
MEDICAL OUT-PATIENTS	1 p.m. Dr. Markham Skerritt.	1 p.m. Dr. Harrison.	1 p.m. Dr. Markham Skerritt.	1 p.m. Physician's Assistant.	1 p.m. Dr. Harrison.	1 p.m. Physician's Assistant.
SURGICAL OUT-PATIENTS	1 p.m. The Surgeon for the week.	1 p.m. Mr. Lansdown. Mr. Dobson.	1 p.m. Mr. Keall. Mr. Pickering.	1 p.m. The Surgeon for the week.	1 p.m. Mr. Lansdown. Mr. Dobson.	1 p.m. Mr. Keall. Mr. Pickering.
CLINICAL LECTURES ..	*Medical.*—2 p.m. Dr. Burder.	*Medical.*—2 p.m. Dr. Harrison.	*Surgical.*—12 noon. The Surgeons in turn.		*Medical.*—2 p.m. Dr. Markham Skerritt.	
DISEASES OF WOMEN ..	12 noon. Dr. Aust Lawrence.			12 noon. Dr. Aust Lawrence.		
DISEASES OF THE SKIN		1 p.m. Dr. Harrison.			1 p.m. Dr. Harrison.	
DISEASES OF THE EYE			1 p.m. Mr. Keall.			1 p.m. Mr. Keall.
DISEASES OF THE EAR AND THROAT ..	12 noon. Mr. Pickering.		1.30 p.m. Mr. Pickering.			
DENTAL SURGERY ..	9 a.m. Mr. Parson.			9 a.m. Mr. Parson.		
POST-MORTEM EXAMINATIONS	At 2 p.m. by the Physicians and Surgeons.					

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Summer Session.

Practical Chemistry ... ... — *Prize*, C. J. Glasson. *Certificates*, W. J. Hill, H. F. Semple.

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Operative Surgery ... ... — *Prize*, W. J. T. Barker. *Certificates*, F. W. Weir, H. C. Thurston.

Pathology and Morbid Anatomy — *Prize*, W. J. T. Barker.

Winter Session.

Anatomy and Physiology, Junior Class ... ... — *Prize*, W. M. Barclay.

Junior Class of Anatomy ... — *Lecturer's Prize*, A. H. Joseph. *Certificates*, H. F. Semple, W. J. Watkins, C. E. S. Flemming, C. T. Hudson, A. Leche.

WINTER SESSION.

Junior Class of Physiology ...	*Certificates*, A. H. Joseph, C. E. S. Flemming, H. T. S. Aveline, T. R. Baker, H. A. Burleigh, R. F. W. Tucker, E. Ward, W. J. Watkins, H. F. Semple, C. T. Hudson.
Senior Class of Anatomy... ...	*Prize*, A. J. Tomkins. *Lecturer's Prize*, H. I. Pocock. *Certificates*, L. H. Williams, F. S. Hawkins, C. W. Lockyer, W. T. Ord, C. J. S. Shaw, J. B. Webb, C. J. Glasson, A. R. Aubrey, J. E. Trask.
Senior Class of Physiology ...	*Prize*, A. J. Tomkins. *Certificates*, H. I. Pocock, H. L. Evans, L. H. Williams, A. W. Riddell, C. J. S. Shaw, W. C. Swayne, F. S. Hawkins, A. R. Aubrey, T. Richards, J. E. Trask.
Practical Anatomy	*Prize*, L. H. Williams.
Chemistry	*Prize*, W. M. Barclay. *Certificates*, E. Ward, H. T. S. Aveline, A. Leche, R. J. Marks, H. F. Semple, W. J. Watkins, G. Banbury.
Medicine	*Prize*, A. N. Little. *Certificates*, W. J. T. Barker, W. G. Thorold, W. Basset.
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Suple's Surgical Prize, a Gold Medal and Seven Guineas in money	W. G. Thorold.
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Crosby Leonard Prize, for proficiency in Surgery	H. H. Tomkins.
Pathological Prizes	G. G. Adams, W. D. Duffett, H. C. Thurston.

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Second Sanders' Scholarship, of the same value	H. W. Windsor-Aubrey.
Lady Haberfield Prize, of the value of £30, for proficiency in Medicine, Surgery and Obstetric Medicine	W. J. T. Barker.
Pathological Clerkship Prize, of the value of £3 3s.	C. E. Evans.

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Of a total of nine candidates who passed with distinction in Political Economy (Group D), four were students of the College.

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